THE BUILDER

INCORPORATING

"ARCHITECTURE" AND "THE BRITISH ARCHITECT"

VOL. CLX MARCH 28 1941 No. 5121

POST-WAR HOUSES

THE Prime Minister has long held the reputation for saying the right thing at the right time, in terms which make an immediate and lasting appeal to the listener. When he speaks of housing, therefore, we cannot afford to pass over his remarks as one might with one less famed for responsible speaking. It is true that in this case we have to rely upon a conversation with Mr. George Hicks,* but the words as reported are crisp and to the point and may be accepted as substantially correct.

The Prime Minister is stated to have said in this conversation: "I feel that the home has been built too much round the kitchen. A home ought to be in a sense free from the kitchen, and I want you, and those who will be charged with the responsibility of providing homes, to see that the house is free from domination by the utility side."

Now this approach to the subject of home-building is expressed very differently from the more popular treatment of the subject. Someone not so many years ago described the home as "a machine for living," and the kitchen has filled the pages of the popular magazines dealing with domestic house-building.

The speculative builder has taken the tip, and is wont to spread himself lavishly upon the superficial finishing of a kitchen, which makes up for a sad lack of floor space, with ample white tiling and chromium plate, while the rooms of the house in which the greatest number spend the greater part of their time at home receive little attention from the designer. And what a chilly idea it is, to speak of a home as a machine!

Just before the war we heard of a lecturer at a meeting of a women's society voicing something of the same sort, with no little daring in such company. He suggested that the old-fashioned cook and kitchen-maid brought a great deal of interest into the kitchen, and into her own life, by the application of sheer elbow grease to floors and tables scrubbed white and spotless, brass taps shining like a mirror, and the grate shining with black-lead. And he went on to suggest that it might be possible that the problem of domestic service was not being solved by chromium taps, stove-enamelling and vacuum cleaners, but might have been partially caused by this taking away of some of the objects of pride in domestic service. It is a moot point.

However, the idea of putting the kitchen in its place need not mean turning it into a cell for the drudge; it means, primarily, restoring the remainder of the house to its proper position of importance. That is to say, that the people at home live, and will continue to live, in the living-rooms, and that the measure of their enjoyment of home will be the degree of real charm and interest infused into the architectural treatment of these rooms. The kitchen, however equipped to cook and clean, ought to be taken for granted in such a state of civilisation as we are supposed to have attained.

Mr. Hicks, we note, referred to houses he had seen in Sweden built with a semi-basement which was used as a drying room for the laundry. "Semi-basement" has an ominous sound, recalling memories of badly-lighted, ill-ventilated Victorian houses, long since condemned as unsuitable for modern living. Proper drying space for laundry is seldom, if ever, provided in the small working-class house, though communal laundry accommodation has been often arranged in connection with large housing schemes. If provision for the drying of laundry is considered essential for individual small houses, we trust it may be found possible to give it otherwise than by a "semi-basement." The temptation to turn such space into a dump for all manner of clutter and rubbish would, we fear, be too much for the ordinary British working-class household.

We have also noted a suggestion from Mr. Hicks that women are to be consulted on the rebuilding of houses, and this should be a reasonable and proper thing to do. At the same time, the idea that domestic architecture is really a more suitable province for women than for men must not be allowed to take too firm a root. The trained woman architect can be as efficient as a man, but the trained architect, whether of one sex or the other, will always be the better judge of building than either man or woman of the untrained category. The "doers" and the "planners" will always have their place in any part of civilised life, and it is rarely that both are represented in one individual. The fallacy that men architects always put the kitchen cooker in the darkest corner, and that they do not know what a cupboard is, has been allowed to stand too long. The fact of the matter is that, given freedom of planning, the architect of either sex knows perfectly well the simple ideals of convenience at which to aim, and that he or she will provide all the cupboards a housewife would dream of, provided the housewife's husband will pay the bill.

In actual fact, the subject of house design has been well thrashed out in the last twenty years, and there is not much more to be learned upon the subject, unless it is that there is only one way to produce a tasteful house, and that is to have it designed by a trained, intelligent and tasteful person. The great blunder which the public of the last twenty years have made is that they have generally grudged paying for something which seems to them intangible and unnecessary, little realising that they are paying in very tangible form for their parsimony in the dullness of their homes, the irritations of shoddy construction, and the ugliness of their streets and outlooks.

We commend this very simple prescription to the home builders of the new world to come—Use your architects! And unless we are determined that the architects shall be used to the best advantage in their own and proper province, we shall be on the way to perpetrating once more the same blunders which produced the ghastly new suburbs which have made their unlovely appearance since the last war. Those architects will know well how to meet the sensible criticism which the Prime Minister made, and which none can appreciate better than they.

So let our houses of the future be architectural, and their living-rooms places for interesting living, and let the commonsense of the kitchen take care of itself—to minister to, and not dominate, the home.

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* Reported on page 219, *The Builder*, February 28.

ST. JAMES'S CHURCH, NEW BRIGHTON : NEW SCREEN.

This church is one built during the best period of the late Sir Gilbert Scott. The new work provides a newly-furnished side chapel with altar, reredos, screen and panelling, new flooring and new painted decoration to the ceiling. The screen is in oak, with walnut veneers, and blue and silvered metal. The work is in the nature of a memorial and cost £600. The supports to the oak altar rail are painted metal. A floor of Hopton Wood stone and Swedish green marble surrounds the altar. The remainder of the floor is laid with narrow oak boards. Ceiling colours and background of east wall are dove-grey and blue, dark blue and white. The architect is Mr. Bernard Miller, B.Arch., F.R.I.B.A.

NOTES AND NEWS

Camp Cost Allegations to be Investigated.

MR. ATTLEE, Lord Privy Seal, has announced in the House of Commons that a High Court judge is to examine the papers relating to allegations of waste, extravagance and dishonesty in carrying out Government contracts. Mr. Attlee declined to set up a judicial court of inquiry; it would, he said, occupy the time of many officers and others, some of whom were overseas. He emphasised, however, that the Government was much concerned to see that no person who had been guilty of a serious offence should escape punishment. But the report of the Committee, he added, did not establish the fact that there was any such person. It was proposed, therefore, in the first instance, to refer the papers to a judge of the High Court in order to ascertain if in his opinion there was a *prima facie* case against any particular officers or persons which would justify further action.

Replanning London: R.A. Committee's Progress.

WE hear that the R.A. Committee which is studying the problem of the replanning of London is making good progress, and is in close touch with all the public authorities, including the Ministry of Works and Buildings. The nation, we believe, can be assured of a brilliant contribution to the planning of future development. The plan will be bold in its scope and brilliant in conception. Some of the leading architects and town planners as well as the foremost economists are advising and co-operating. Certain areas subsidiary to the general traffic lines are being planned by groups of experts. While it is early to state what the main lines of the plan will be, it may be said that the conception aims at making London the finest city in the world. It is expected that the plan will take two years to produce.

Coventry Cathedral: Problem of Rebuilding.

SPEAKING recently to the Leamington and Warwick Rotary Club, the Provost of Coventry (Very Rev. R. T. Howard) said that the Council of the Cathedral would be meeting shortly, and authoritative decisions taken; but, speaking personally and unofficially, he had no doubt that the Cathedral would be rebuilt. His personal view was that the Cathedral should be rebuilt on the present site. There was a moral demand not to leave the ruins as ruins, as had been suggested. "Beautiful, tragic and dignified as are the ruins," added the Provost, "the rebuilding is just irresistible. I dare not forecast the design of the new Cathedral, but it will be a big building, combining the beauty of the old design with something new expressing this age, and gathering into it all the beauty of the past."

Mr. A. C. Bunch, F.R.I.B.A., the County Architect, said that whilst the destruction of the Cathedral was deplored, we had to remember that a good deal of mediæval Coventry had already been destroyed in the industrial development of the city. "As to the rebuilding of a Gothic Cathedral I am very doubtful, because however much he may try, the ordinary modern workman cannot have the spirit of the mediæval craftsman. He is brought up in a different school, and the danger in reconstructing a Gothic church is that one may get the bones and not have the spirit. It is a difficult matter, but I am not sure whether those gaunt ruins are more eloquent as to what happens when man forgets the divine rule than any reconstructed building may ever be."

New York Assistance for Children of British Architects.

NEW YORK architects (according to a newspaper report) are helping to raise £2,500 for the children of British architects in need of assistance, Architectural schools in the United States as well as architectural associations and societies have also been invited to support this effort.

A Journalist's Jubilee.

THE many friends of Mr. H. Greville Montgomery, Hon.A.R.I.B.A., will wish to congratulate him upon entering upon his 50th year as Editor of the *British Clayworker*, a journal which he founded in 1892. Mr. Montgomery, who is in excellent health, is now living in the Thames Valley.

Exhibition of Firemen's Pictures.

THE London County Council has decided to extend until Sunday, March 30, the public exhibition (noticed in our last issue) at the L.C.C. Central School of Arts and Crafts, Southampton-row, W.C.1, of paintings and drawings by members of the London Fire Service and other fire services in the London region.

Preservation of the Crook o' Lune.

LUNESDALE Rural District Council has approved a scheme for the purchase of eight acres of land adjacent to the Crook o' Lune, Halton, at a cost of £1,500. Some time ago, when it was suggested that the land might be developed for building purposes, feeling ran high, and in order to preserve this famous beauty spot a subscription list was opened, and contributions were received from all parts of the country and abroad.

IN 1916.

FROM *The Builder*, MARCH 24.

TRADE WITH SPAIN AFTER THE WAR.—According to information furnished by H.M. Consul at Bilbao, local business men anticipate that after the war there will be a rush of Germans to Spain intent on doing business in and trading with that country. . . . H.M. Consul therefore suggests to United Kingdom firms, if they wish to preserve their position in Spain, they should consolidate their connections and clientele so as to be able to compete against the expected German business effort.

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CORRESPONDENCE

[While we are glad to publish letters on professional and other matters of interest to our readers, it must be understood that we do not necessarily endorse the remarks of correspondents, who will oblige us if they will express their views as briefly as possible.]

The Welfare of Building Operatives.

TO THE EDITOR OF *The Builder*.

SIR,—I was delighted to read, and feel very grateful for, your editorial in last week's issue of *The Builder* on "The Welfare of Building Operatives."

Never before have building operatives been compelled to leave their homes and families so much—to become so mobile—as since the beginning of the war. Many have had to go to jobs at the "back of beyond." At the request of the employer or of the Employment Exchange official they have had, in a number of cases, to go to the virgin countryside, the nearest villages even being at a considerable distance.

These building operatives have had to be pioneers in every meaning of the word. They have had to labour with Nature in the raw; to deal with the problems of starting operations at zero; to endure the rigours of winter and wet weather in adverse circumstances; to scramble about muddy fields; to have their meals and to sleep "in the rough"; to spend long nights, isolated from the conveniences and amenities of civilisation, in bleak communion with the dark. Attention to their welfare has been haphazard, to say the least.

Apart from the fact that such conditions must have had a bad effect on building production—for how can men do their best when their meals have been muddled, or when they have had to work in wet clothes, or turn out to the job in the morning after an uncomfortable, sleepless night?—they must, also, have been harmful to the health and spirit of the men themselves.

What I should like to stress is that it is impossible to pay too much attention to the workers' welfare on these remote contracts, or, indeed, on any jobs where the workers are working away from their homes. In every respect I am certain that the closest detailed consideration of the human needs of building operatives will prove of benefit and value. Men are not like plant or machinery, to be dumped anywhere without a further thought. Provision—intelligent, understanding provision—must be made to meet their living needs and their recreational requirements.

While we are profoundly grateful for the great endeavours of the Ministry of Labour to ensure the operatives' welfare—the welfare conditions laid down in the Memorandum issued on February 5 represent a magnificent reforming advance—we do appreciate that how much is actually done will depend largely on the attitude of the contractors and the positive initiative of architects and civil engineers.

I thank you for the statement that "In so far as the good conduct of the contractor is at all times vested in the architect or engineer, then, most especially by reason of their greater imaginative power and ability to plan, the problem (of welfare) demands their attention. . . . If an advance is to be made and some determined standard of welfare facilities provided, it is the duty of the architect or engineer to indicate to the contractor at the time of tendering the nature and extent of these facilities, so that the contractor may make due allowance for such provision at the time of tendering, later to be embodied in the conditions of the contract."

What I feel is that the more this problem of welfare is brought into open discussion the better. I am certain that the question of workers' welfare on present

building operations and in the future is a matter of outstanding importance, not merely to the workers themselves, but to all concerned with building. What I would like to see is a conscious endeavour on the part of architects and engineers in general to lay down the positive practical welfare provisions so as to establish a minimum standard. They can be assured of the support of the organised operatives.

LUKE FAWCETT,
Acting General Secretary,
Amalgamated Union of
Building Trade Workers.

Clapham Common, S.W.4.

Reservation of Architects.

TO THE EDITOR OF *The Builder*.

SIR,—As a supporter of the A.A.S.T.A., I should like to reply to Mr. T. E. Scott's "comment" in his capacity as Chairman of the Architecture and Public Utilities Committee.

First, Mr. Scott refers to a statement that "architects were removed from the Schedule of Reserved Occupations at the request of the Architecture and Public Utilities Committee." I do not think such a statement was ever made. The A.A.S.T.A. report on their deputation to the Ministry of Labour credited an official with saying that "dereservation had been carried out at the request of the profession." Mr. Scott should remember that his committee is not by any means the whole profession.

Secondly, Mr. Scott calls this statement a "half-truth," apparently referring to the fact that his committee, at the time of its disastrous intervention at the end of 1939, recommended the raising of the age of reservation to 45, and did not recommend complete dereservation. Mr. Scott is no doubt correct, but I am surprised that he thinks it worth while to draw attention to the fact. The average age of the R.I.B.A. Council, whose nominee he is, has too often been the subject of criticism.

Finally, it would be interesting to know how many architects under the age of 45 and who had military experience in the last war "were anxious to join their old units." In view of the fact that a man who is now 45 would have been only 22 in 1918, the number must be very small—too small, in fact, to serve as a basis for the increase in the age of reservation that Mr. Scott's committee recommended.

BIRKIN HAWARD.

Hampstead, N.W.3.

Camp Building Scandals.

TO THE EDITOR OF *The Builder*.

SIR,—The real fault in the building of the militia camps [see *The Builder*, March 14] is a lack of clear thinking and a true scale of values. The correct sequence is thought, word and deed; or, in terms of building, intention, plan, construction. Many leave out the second act, and then wonder why the final result is not satisfactory. Further, the trinity of client, architect and builder cannot be lightly ignored without disastrous results. Thought and design there must be, otherwise the material is either misused or entirely wasted.

Before any building can be successfully erected the site must be surveyed, sketch plans settled and approved before working drawings can be made. To keep check on costs and materials quantities must be taken off. Only then can a contractor safely estimate the cost, but evidently, in the rush, all this preliminary work was omitted. The bureaucratic machine is simply a senseless robot with a gaping void fed with innumerable official forms. These run in cast-iron channels without any effort. If one of these forms be lost or remain undigested in the wretched machine it cannot function, and there is no known purge which has any apparent effect. The only thing to do is to give the handle another turn and hope for the best. Alternatively, give the machine another form in the hope that it will pass through safely.

The building knowledge of the average regular R.E. officer is very elementary, and he cannot be expected to have the experience of a fully qualified architect who has spent a lifetime at the job. He has other duties to carry out, but large-scale building should not be one of them. He may be all right in constructing field works, but hopeless when it comes to designing and supervising the construction of a complicated building. This is where the architect should come in with his specialised knowledge, and there are now some of our profession assisting in this way, but it is doubtful if any of the really senior posts are occupied by architects. No architect would start to build without proper plans and specification, but here we have the War Office handing out sites and simply telling the contractor to go ahead! The architect was ignored. Now the consequences have to be faced, but let this be a lesson for the future, for the public will expect more intelligent direction from the newly created Ministry of Works and Buildings.

J. E. RHIND, A.R.I.B.A.,
Dipl.Arch.(Aber.).

Weybourne, Surrey.

Ancient Lights in Demolished Buildings.

TO THE EDITOR OF *The Builder*.

SIR,—The long letter of your correspondent in *The Builder* of March 7 scarcely seems to justify the categorical statement in his first letter in *The Builder* of January 17, which was as follows: "Another point that this case (*News of the World* v. Fairhead) made clear was that if a prolonged interval should take place between demolition and reconstruction, the Courts would regard the easements as abandoned."

This point was neither pleaded nor even raised by counsel, who based his claim to abandonment on the minute amount of incorporation. The learned Judge merely gave an opinion as to what the Courts *might* decide if very small incorporation were accompanied by delay. It is significant that this opinion was not reported for guidance.

Your correspondent appears to have read into the judgment a very important decision which it does not in fact contain.

PERCY J. WALDRAM.

Edgware, Middlesex.

COMING EVENTS

Friday, March 28. Architects' Registration Council.— Quarterly meeting.

Friday, March 28. Shoreditch Housing Association, Ltd. Annual Meeting, Speaker, Mr. A. E. Appelbe. At the Housing Centre, S.W.1. 2.30 p.m.

Friday-Sunday, March 28-30. Garden Cities Association. Conference on "Practical Problems of National Planning." At Oxford.

Tuesday, April 1. Housing Centre. Luncheon: Mr. A. E. Appelbe on "War Damage." 1 p.m.

Thursday, April 3. Incorporated Association of Architects and Surveyors' London and Home Counties Branch. Annual Luncheon. The Rt. Hon. Arthur Greenwood has intimated his intention to be present.

Tuesday, April 8. Institution of Structural Engineers' Scottish Branch. Sessional Meeting. At Glasgow.

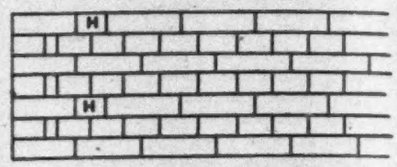
Dutch Bond.

TO THE EDITOR OF *The Builder*.

SIR,—The publication of letters in the issue of *The Builder* for February 21 concerning English cross bond and Dutch bond is very interesting. The following extract is taken from Cassell's Building Construction, by Professor Henry Adams:

"SOME OTHER BONDS."

"St. Andrew's cross bond or English cross bond (header inserted near end of alternate stretching courses), Fig. 161."



Dutch bond, as Mr. Oliver points out, and as shown in Mr. Cook's sketch, differs much from the above. It would be interesting to know if "St. Andrew's" or "Dutch" bond was used in Wolsey Gate-house, Surrey.

H. EGGITT.

Creek-road, March.

Standardisation of House Building.

TO THE EDITOR OF *The Builder*.

SIR,—In a machine age the hand-built house is an expensive anomaly. The slow laying of brick by brick and joist by joist is outmoded and outdated.

The only way to catch up on the enormous housing deficiency after the war will be by standardisation and mass production, utilising discarded war factories for the purpose.

That there is no reason why mass production should not go hand in hand with good architecture has been proved in America, where it has been tried on many projects.

I. L. JAMES, L.R.I.B.A.

34, Babbacombe-road,
Childwall, Liverpool.

An Appeal for the Troops.

TO THE EDITOR OF *The Builder*.

SIR,—*The Builder* would be very much appreciated by men of the building profession now in the Armed Forces. If any of your readers would care to send us their copies regularly when they have finished with them we should be very pleased to forward them to members now on active service, and we can assure you that they will be gratefully received.

E. V. PENN,
Acting Secretary, A.A.S.T.A.

113, High Holborn, W.C.1.

[Other Correspondence is unavoidably held over.—Ed.]

Post-War Glasgow Housing.

AT a recent meeting of the Glasgow Corporation, the convener of the Housing Committee stated that the Building Department is preparing for a very large output of houses after the war. He indicated that the use of alternative methods of construction on an extensive scale is being contemplated. Timber erection would be exploited to some extent, but the main form of building would be of poured concrete. Experiments are being made with this style of structure, to be undertaken on mass-production lines.

War-Time Building Practice.

In the current article in this series, Mr. R. Cotterell Butler, A.R.I.B.A., deals with "Provisional Building: Construction: Economic Efficiency and Prefabrication." This article will be found on page 320.

WORKS AND BUILDINGS

THE ACTIVITIES OF THE MINISTRY

DURING a recent debate in the House of Commons, MR. HICKS, Parliamentary Secretary to the Ministry of Works and Buildings, gave an account of the work of his Department. In the course of a long statement he said that a great deal of the work for Civil Departments which the Office of Works used to do in the days of peace had, of course, been suspended now that they were faced with the necessity of limiting building operations to those which were not only urgent but also vitally necessary for the prosecution of the war. But they had continued to press on with those works which satisfied this condition and had in hand a large programme of hospitals, food stores and general storage accommodation in various parts of the country. They would also shortly be building hostels for workers in war factories; and, of course, retained responsibility for the maintenance and adaptation, not only of all Government buildings throughout the country, but for all those which it had been necessary to requisition or hire for war purposes. A good deal of work had been regionalised and the removal from London of Headquarter staffs whose work could be performed outside it had led to a greatly increased demand for accommodation in the Provinces. Steps had been taken both in London and the Provinces to create a reserve of office accommodation with the object of ensuring that the machine of Government should be able to function in all circumstances. At present the staff for which they were responsible for providing offices numbered about 400,000 in London and the Provinces. They were paying some £4,000,000 a year in rent. At present the Central Register of Accommodation received requests for earmarking of premises from Departments at the rate of about 4,500 a week, and the total number of requests they had received since it was set up was in excess of 300,000. At present the number of live entries was nearly 150,000.

His Ministry was responsible for the work formerly handled by the Ministry of Supply which dealt with the building of new Ordnance Factories and the approval of plans for new private factories or extensions to existing private factories. With the exception of a few cases where the swapping of horses in mid-stream would have been unjustifiable, they had taken over the construction of new factories and had also assumed responsibility for examining and approving in advance proposals from munition firms to extend their works to meet expanding Government requirements.

Under the licensing system for civil building, which came into operation on October 7, all building operations costing more than £500 —the figure would shortly be reduced to £100 —except for those paid for by a Government Department, or which consisted merely of roofing repairs or first-aid repairs, required a licence from the Ministry of Works and Buildings, or in the case of local authorities and public undertakings, an authorisation from the appropriate Government Department. The Ministry of Works and Buildings had licensing offices in each of the twelve Civil Defence Regions. Their local licensing officers had fairly wide delegated powers which they were encouraged to use. Their duty was to ensure, in consultation with interested Departments, that only work which contributed something specific to the war effort should be allowed to continue or be started.

His Ministry was at present doing a number of camps for the War Office and supervising a large aircraft factory scheme on behalf of the Ministry of Aircraft Production. Work was also under construction for the Ministry of Supply, Air Ministry and Admiralty.

Since his Ministry had taken over the question of building priority, they had made a radical change in the system which would, he hoped, make for better results all round. Previously they had attempted a priority system in the strict sense of the term, by which he meant that certain classes of work were given specially favoured treatment as regards labour and materials as compared with others. The danger of this system, as they found to their cost, was that it was almost impossible to prevent such a large number of works getting priority that the whole system defeated its object. By the end of last year they found that they were trying to build considerably more than the capacity of the building industry could carry.

They had therefore instituted a new system which was just coming into operation, whereby they first estimated the total quantity of building of which the resources of the country were capable in each given period. They measured this by value and, in accordance with the instructions of the Production Executive, allocated it between Departments so that each Department knew what share of the building capacity of the country it would have at its disposal for a given period. It was the job of the Departments to arrange within their own allocation which jobs were to be speeded up, which to be stopped, and so on. They were limiting the programme so that the amount of construction work to be undertaken would be as closely as possible related to the labour and materials available, and, as far as possible, only those works which would be effective before or by the end of the summer were being proceeded with. Works requiring a longer period for their completion or new works were only being permitted if they were of great strategic importance.

Referring to cement supplies, the speaker said that after the shortage of last summer they had taken all possible steps to see that no such thing could ever occur again. Very large stocks had been built up, and they had seen to it that these were distributed in such a way that in the event of difficulties with transport they hoped cement would be available all over the country. What they needed from the cement manufacturers was an output of cement as great as, or possibly a little greater than, the total which the building and civil engineering industry of this country could possibly use; and that they had got.

Brick Shortage Largely Cured.

Bricks, too, were giving trouble last autumn. There was a serious shortage in many districts, mainly due to maldistribution and transport difficulties. This shortage had now been largely cured. The Director of Bricks was organising the industry on a national basis. Reports and statistics were becoming available for the first time, and it was hoped that the future allocation of orders and the rational control of brickworks would prevent any shortage recurring. For this purpose the country had been divided into zones, and stocks were being accumulated.

The weight of enemy air attack on various parts of the country has been such as to produce a considerable shortage of roofing materials. They had therefore appointed a Director to deal with these commodities, and arrangements had been made for a control of specialist roofing contractors so as to avoid shortage of labour, which had impeded air raid damage repair. They were also developing methods of emergency roofing repair.

As an essential part in the control of material, the Standardisation Department had been created, the object of which was to secure the maximum and most economical use of the raw materials and building materials available. The standardisation of roofing felts had, for instance, at once increased output by 25 per cent., with an actual reduction in the raw materials required. They would follow this policy through every field of work and type of material. Among other major steps they were hoping drastically to reduce the number of sizes of bricks manufactured in the country. At present there were 16 or 17 different sizes.

His Noble Friend and he were, with his Rt. Hon. Friend the Minister of Labour, at present in close consultation with the industry discussing proposals for a complete census of building capacity, and the aim of the proposals would be to increase efficiency, particularly by avoiding senseless competition between firms for work and for labour. They hoped also to bring the smaller builders in for work which they could handle.

Referring to a special repair service for houses, the speaker said arrangements had been made for the withdrawal from the army of a number of building trade operatives which could be formed into a mobile corps of house repairers working directly under the Ministry of Works and Buildings. If a local authority wanted help it applied to the Ministry of Health, which in turn asked them to take over part of the field of work. They had at present about 3,000 men working in London and upwards of 800 in provincial towns. These men were employed strictly in accordance with the rules of the building trade, with the exception that they were guaranteed a 44-hour week and paid fares home once every six months during their period of work. They were also paid subsistence allowance where they were compelled to maintain two homes. Here was a select corps of shock troops which could be rushed in at any point where the enemy attack became too much for the first-aid repair organisation of the local authority.

For the repair of factories there had been in existence for some time an excellent organisation which was worked out at the Ministry of Aircraft Production. With a view to helping this organisation they had set up a Department of Emergency Repairs, establishing a nation-wide organisation with emergency works officers in all important target towns and areas which were controlled by several assistant directors covering one or more Civil Defence Regions. The organisation was at the disposal of local authorities and other departments, too, if required. In connection with this organisation they were making use of an arrangement which was made at the outbreak of war, whereby what was then the Office of Works set up dumps of building materials in target towns for air-raid repair. These were being extended, and arrangements were being made for the creation of strategic dumps, located so as to be able to serve more than one of the great industrial areas of the country. Materials would be released and labour allocated in accordance with priorities decided by the Regional Commissioners as between civil and war factory requirements, and by the local reconstruction panels and area officers of the supply ministries as between one war factory and another.

As part of this scheme, lists of architects, surveyors and engineers were being prepared who would be instantly available to the Emergency Works Officers of his Ministry to assist in giving technical advice and watching repair work through to completion with a view to ensuring that it was done in the most rapid and economical way.

As to reconstruction, as a further step in the direction of finding out the difficulties which lay before us, and in order to surmount them, his Noble Friend had had test surveys made in co-operation with the local authorities in certain heavily damaged areas. They had the first reports now, and when they were fully examined they would be in a better position to see exactly what legislative and administrative changes might be necessary to enable redevelopment to be undertaken. In particular, they had invited to assist them a consultative panel consisting of some of the best-known experts on the subjects with which they had to deal, and were steadily recruiting a small nucleus staff inside the Ministry.

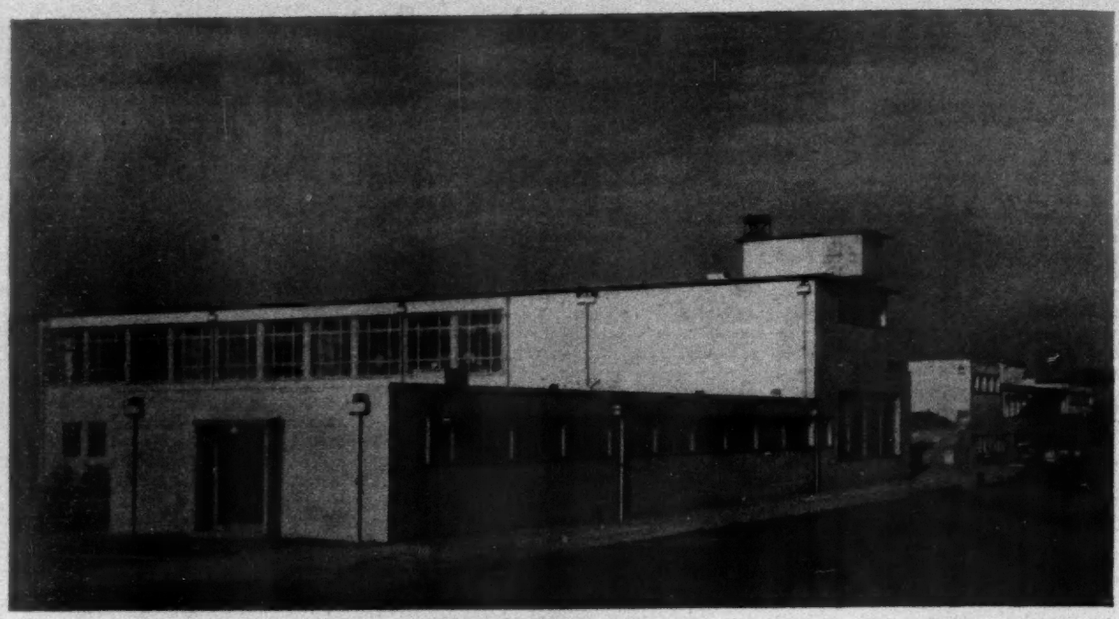
Points from the Debate.

In the debate which followed, MR. LAWSON urged the Government not to let themselves get into the hands of monopolists who were not familiar with the contracting business.

SIR PERCY HARRIS favoured the building of the satellite town and the garden suburb after the war.

MR. SILKIN felt that the work of planning the country after the war was of such importance as to need a new Ministry—a Ministry of Planning and Building. The existing Town and Country Planning Act was inadequate for carrying out any positive planning. Local authorities needed enlarged powers to acquire land for redevelopment.

(Concluded on page 323.)



VIEW OF SCHOOL FROM SOUTH-EAST.

THE CHELL SCHOOL, STOKE-ON-TRENT.

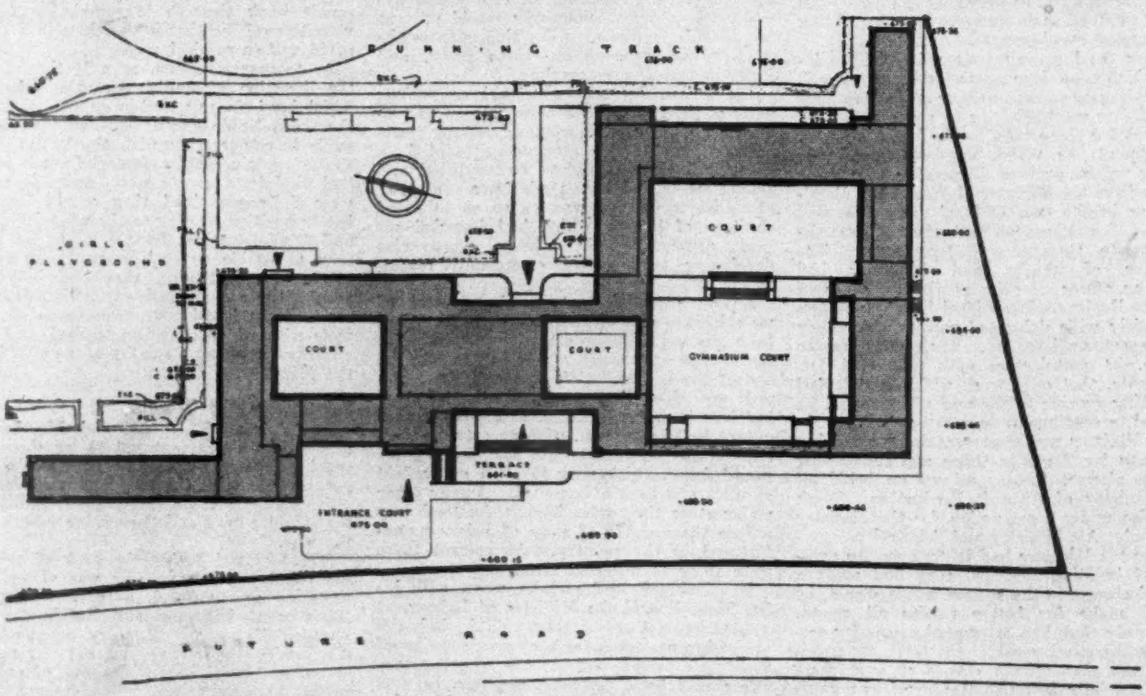
MR. J. R. PIGGOTT, A.R.I.B.A., CHIEF ARCHITECT.

MR. A. E. JONES, DEPUTY CHIEF ARCHITECT. MR. P. BILLINGTON, A.R.I.B.A., ASSISTANT.

The Chell School was opened by Councillor A. Austin in December last, and although originally planned as a Senior Mixed School for 480 scholars, with provision for extension to 720 scholars (not yet carried out), it is now occupied by the scholars of Hanley High School, the scheme for the rebuilding of which had to be abandoned owing to the emergency. The site, 9½ acres in extent, has a pronounced slope from the north of the school, and has been planned at various levels to conform with the natural levels.

Special precautions had to be taken on account of the danger of mining subsidence, as the site is in an area liable to be affected. The precautions included the splitting up of the building in sections and framing each section in light reinforced concrete construction with deep reinforced concrete foundation beams, each unit being designed to "ride out" the effects of subsidence. Two-inch gaps, covered by copper strips, are provided between each unit.

The plan of the school forms an irregular outline, the rooms being grouped round a number of courts at different levels. The school has now been adapted for use as a Boys' High School, the main changes consisted of the adaptation of the Housecraft Room for use as a Physics Laboratory, the flat being utilised for additional storage accommodation. The Craft



LAYOUT.

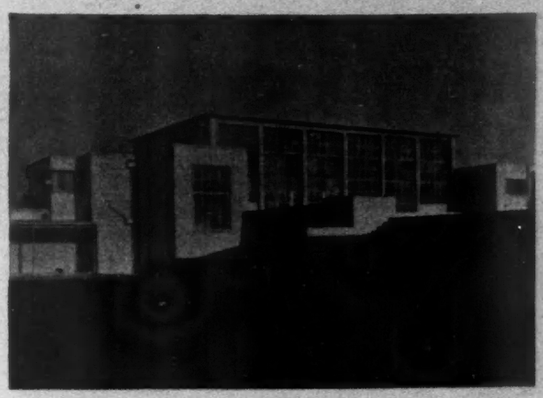
Room has been converted into a Biology Laboratory and the Science Room has been fitted up as a Chemistry Laboratory.

The building is faced externally with buff-coloured rustic facing bricks with pre-cast stone cills and copings. The space between the reinforced concrete frames above cill level is occupied entirely by windows, giving a very light and airy effect to all teaching rooms. All windows are constructed in rust-proofed metal. The roof of the building is flat, formed of reinforced concrete, and the heating, thermostatically controlled and fed by automatically stoked boilers, is by ceiling panels embedded in the concrete ceilings.

The walls of the changing rooms and corridors are flush-pointed brickwork distempered; very few walls have been plastered. The flooring in the teaching rooms is partly "Granwood" flooring and partly "Spartan" reinforced composition flooring. Flush. gymnasium floor is boarded with maple. Flush doors are used throughout the school and the external doors are faced with galvanised steel.

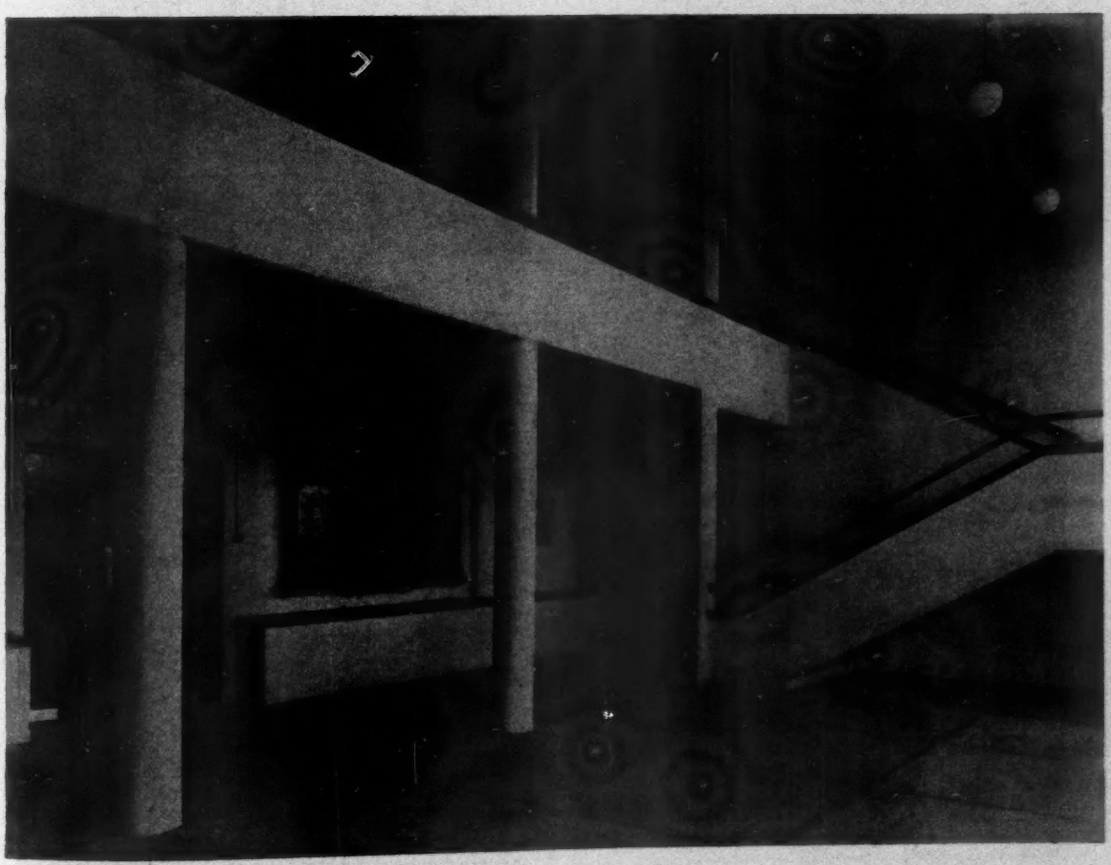
Although it was originally intended to furnish the school with new furniture, it was found necessary to furnish the majority of the school with old desks, benches, etc., from Hanley High School, which were repaired and renovated and altered to suit the new building, as it was found impossible to procure adequate timber for new furniture. The building work, including the site, works, caretaker's house, etc., cost £56,000.

The building was designed and carried out under the direction of Mr. J. R. Piggott, A.R.I.B.A., Chief Architect to the Corporation, with Mr. A. E. Jones, Deputy Chief Architect, assisted by Mr. P. Billington, A.R.I.B.A., Assistant Architect for Educational Buildings. Contractors are on page 318.



VIEW OF GYMNASIUM, FROM SOUTH.

ASSEMBLY HALL, LOOKING TOWARDS STAGE.

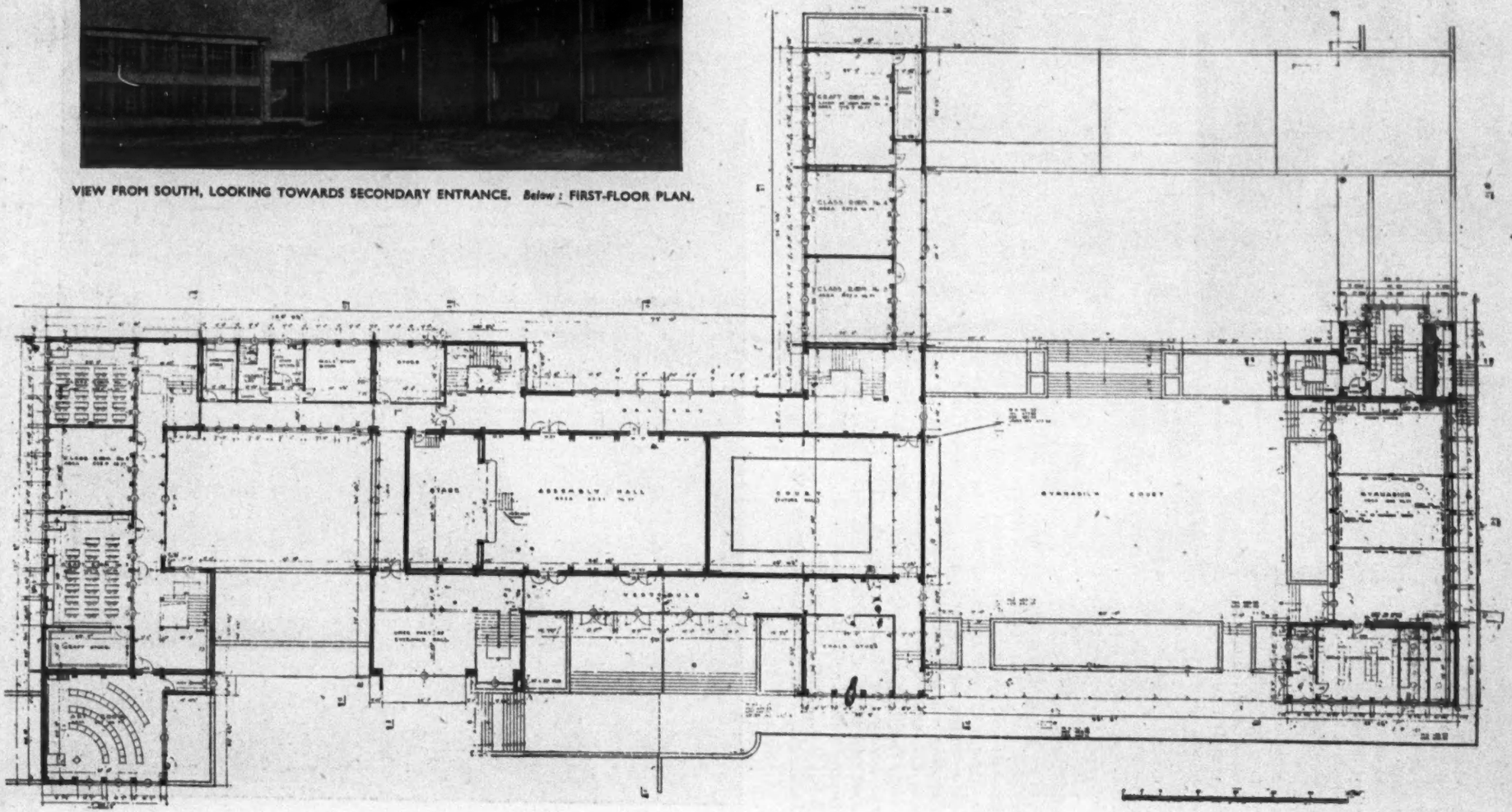


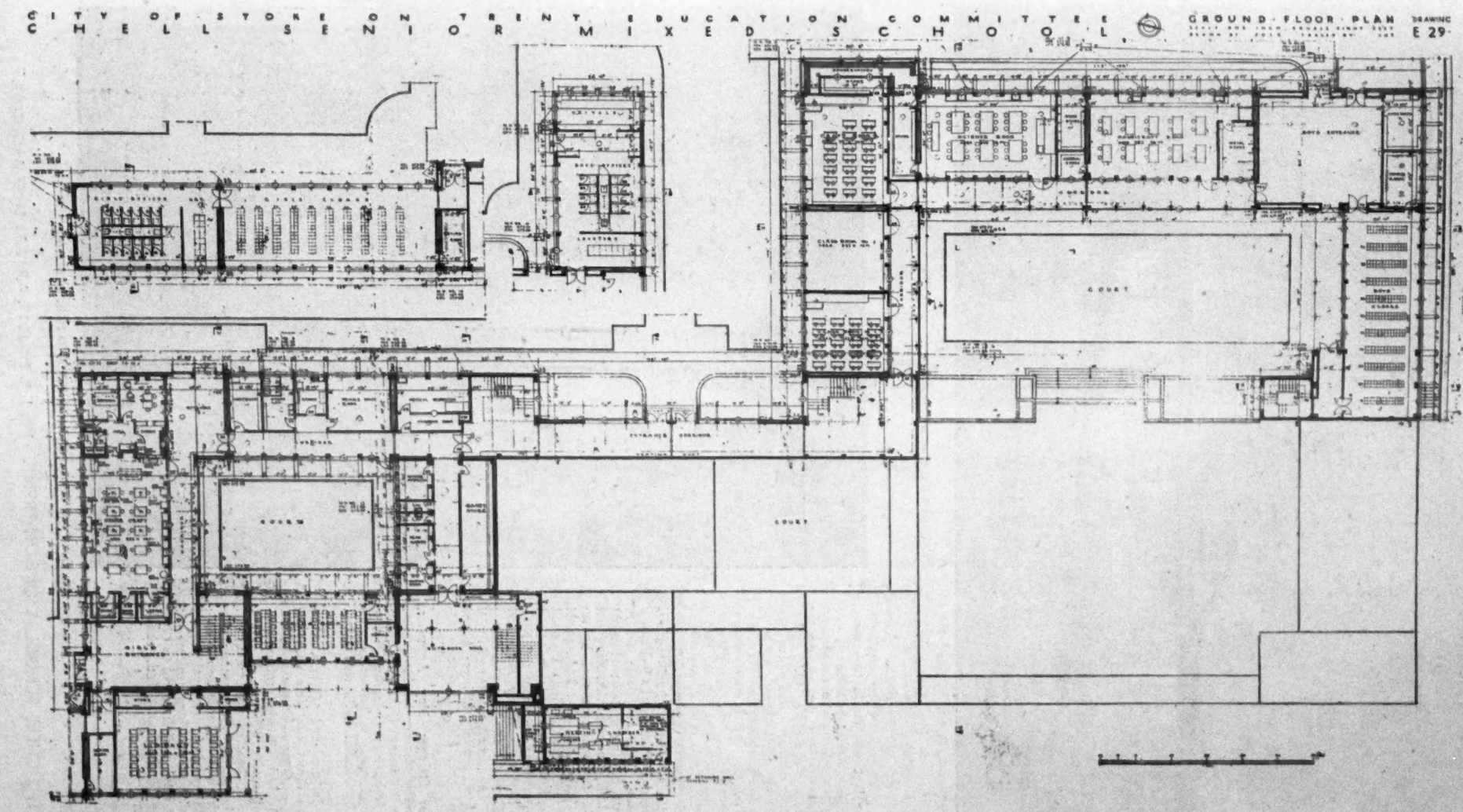
THE MAIN ENTRANCE HALL.

THE CHELL SCHOOL, STOKE-ON-TRENT. MR. J. R. PIGGOTT, A.R.I.B.A., CHIEF ARCHITECT

THE CHELL SCHOOL, STOKE-ON-TRENT.

VIEW FROM SOUTH, LOOKING TOWARDS SECONDARY ENTRANCE. *Below :* FIRST-FLOOR PLAN.





GROUND-FLOOR PLAN.

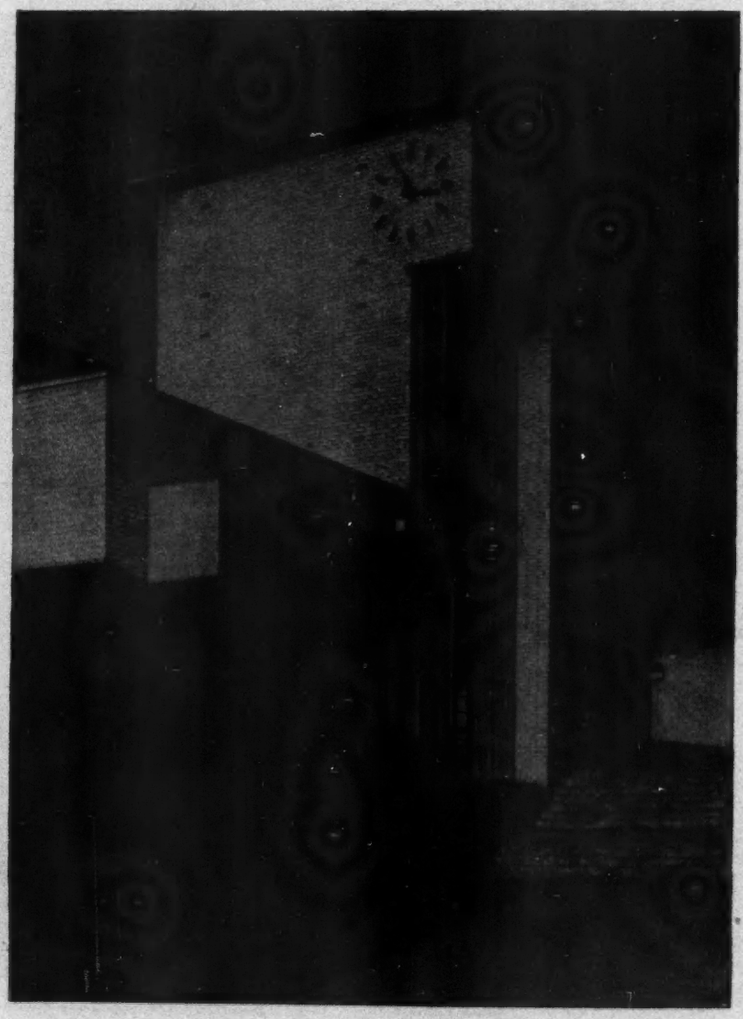
THE CHELL SCHOOL, STOKE-ON-TRENT. MR. J. R. PIGGOTT, A.R.I.B.A., CHIEF ARCHITECT.

VIEW OF GYMNASIUM, FROM EAST.

The contract was let in two parts. The first contract—consisting of the special reinforced concrete foundations and framework—was carried out by Messrs. G. and J. Seddon, Ltd., Stoke. The second contract, comprising the completion of the building, including all brickwork, windows, finishings, etc., was carried out by Messrs. Cooper Bros. (Builders), Ltd., Macclesfield. The clerk of works was Mr. W. Perry. Messrs. Christiani and Nielsen were the reinforced concrete engineers.

The following is a list of sub-contractors engaged on the works :—Painter and Madew, Ltd., electrical; G. S. Hall, panel heating system; Penfold Fencing, Ltd., fencing; J. A. King and Co., Ltd., ferro-concrete roof lights; Richard Crittall and Co., Ltd., panel warming installation; Flexo Plywood Industries, Ltd., flush doors; Ruberoid Co., Ltd., roofing; Christiani and Nielsen, cell concrete; Henry Hope and Sons, Ltd., metal windows and doors; Hilcrete, Ltd., cast stone; A. D. Foulkes, Ltd., sanitary fittings; Alfred Brown and Co., Ltd., cloakroom fittings, etc.; Lockerbie and Wilkinson, Ltd., door fittings; May Acoustics, Ltd., acoustic plaster; H. L. Tucker, "Spartan" flooring; Granwood Flooring Co., Ltd., patent flooring. The buff-coloured rustic facing bricks were supplied by Messrs. Wilkinson Bros., Burslem.

The furniture and fittings were handled as direct contracts with the following firms :—Cooper Bros. (Builders), Ltd., fitted furniture, including laboratory fittings; H. Hunt and Son, gymnastic equipment; G. Fleet and Co., Ltd., proscenium curtains, dark blinds and soft furnishings; Cooke, Bailey, Ltd., removal, repair and cleaning of existing furniture at present at Hanley High School to Chell School; and J. D. Bennet, Ltd., chairs and stools.

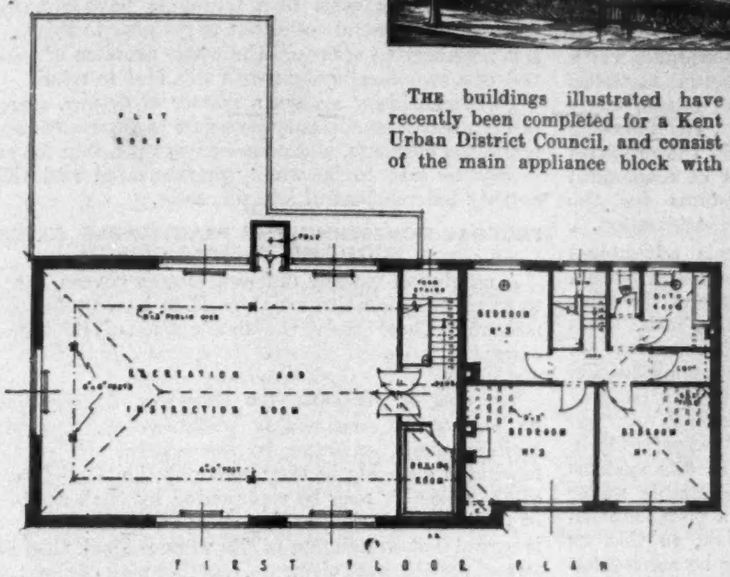


TOWER AND MAIN ENTRANCE.

THE CHELL SCHOOL, STOKE-ON-TRENT. MR. J. R. PIGGOTT, A.R.I.B.A., CHIEF ARCHITECT.

A FIRE STATION AND COTTAGES IN KENT

MESSRS. L. A. CULLIFORD & PARTNERS, FF.R.I.B.A., ARCHITECTS

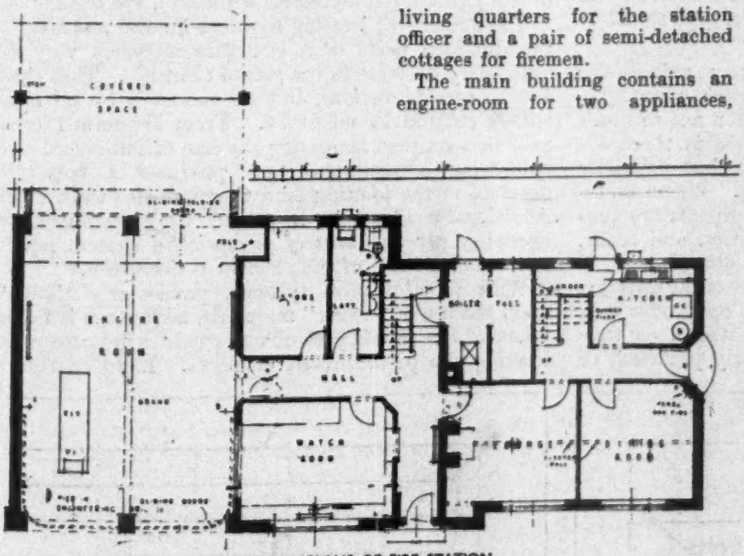


THE buildings illustrated have recently been completed for a Kent Urban District Council, and consist of the main appliance block with living quarters for the station officer and a pair of semi-detached cottages for firemen.

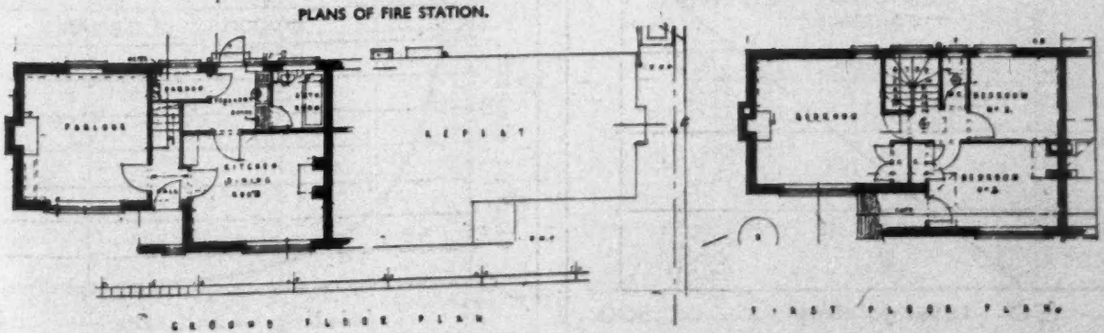
The main building contains an engine-room for two appliances, with covered washing space, and paved exercise yard at the rear. Adjoining this are watch-room, stores, and lavatories, with an entrance hall from the front of the building. A large recreation and instruction room is provided over this portion of the building, and is complete with a pole leading down into the engine-room. This portion has central heating, and a heated drying-room for uniforms is placed at the head of the stairs. The chief fireman's quarters are quite self-contained, with a private entrance, but communication with the appliance room, etc., is provided by a fireproof door. The pair of cottages provide convenient accommodation for the firemen, and the buildings are placed on the site in such a way that the main block can be extended and additional cottages built if future circumstances make this necessary.

The domestic portions of the buildings are built with 11-in. hollow walls and the appliance block with 13½-in. walls, all faced with a warm silver-brown brick. The rooms are covered with a dark-brown tile which provides a pleasant contrast. Metal casements in wood frames are used throughout, and the floors over the engine-room are of reinforced concrete. The ventilating turret over the main block is covered partly with copper and surmounted with a wind-vane depicting a fireman complete with hose.

The architects are Messrs. L. A. Culliford & Partners, FF.R.I.B.A., FF.S.I., the quantity surveyor being Mr. Martin Sheffield, P.A.S.I. The general contractor was Mr. V. R. Stotesbury, 59a, Evelyn-street, S.E.8. Sub-contractors will be found on page 325.



PLANS OF FIRE STATION.



PLANS OF FIREMEN'S COTTAGES.

WAR-TIME BUILDING PRACTICE

By R. Cotterell Butler, A.R.I.B.A.

47.—PROVISIONAL BUILDING.

4.—CONSTRUCTION: ECONOMIC EFFICIENCY AND PREFABRICATION.

Last week—in connection with the use of debris for the construction of provisional buildings—comparisons were drawn between *in situ* and prefabrication systems. Many of the considerations involved apply equally to the use of new materials, and it is not proposed to discuss further, at this stage, general comparisons between these two fundamental structural techniques. Apart from economies which may be effected by the careful choice of actual materials and precise and intelligent consideration of details, many general factors tend to produce economies. The following notes are primarily intended to survey briefly the problems involved in the selection and development of economical site-prefabrication and prefabrication systems for the construction of the type of structure under consideration.

MASS PRODUCTION.—The potential economic advantages of prefabrication lie in the fact that a well-arranged system should make it possible for a high percentage of the work involved to be carried out on a mass-production basis. This is the fundamental and most important single consideration.

The advantages of the employment of mass-production methods may best be realised in connection with building projects of a scattered nature. The overheads or "on costs" of rapidly changing the location of work, particularly where heavy plant is involved, are with *in situ* systems always considerable, and particularly undesirable under war-time conditions. The development of a prefabrication system should aim at minimising site work, so that as much as possible of the work involved may be carried out at a centralised location, and the plant and labour on site be kept as low as possible, and primarily of a type suited to mobile transport.

STANDARDISATION.—Prefabrication to any extent—for prefabrication must be considered a relative quantity—necessitates a high degree of standardisation; not so much of the total structure (although where possible there are considerable economic advantages in this), but primarily in the design of the prefabricated elements. Where buildings of the type required for emergency purposes are concerned, this restriction presents no difficulties, and tends, moreover, to encourage better through-out detailing.

Standardisation in any case, quite apart from the question of prefabrication, reduces costs in so far as operatives may be trained to work on specific tasks, at which, as time goes on, they usually either become extremely proficient or cease to be employed. Again, standardisation enables plant and equipment supplies to be simplified, and materially aids maintenance.

ELIMINATION OF SITE PROCESSES.—The advantages of reducing *in situ* work to a minimum have already been referred to in general notes, but to get near to this minimum it is necessary to approach the whole problem of the evolution of a structural system with this idea in mind.

Prefabrication is always a matter of degree, since practically every contemporary structure incorporates some prefabricated elements, and none—except possibly the caravan—may be said to be wholly prefabricated and therefore entirely independent of site processes.

FACTORS GOVERNING THE PRACTICABLE EXTENT OF ECONOMIC PREFABRICATION.

A number of entirely different factors govern the extent to which prefabrication may be said to be a useful economic measure. These involve the consideration of labour problems, current questions of material restrictions, and of the nature and locality of the work to be carried out.

THE SIZE OF PREFABRICATED ELEMENTS.—A structure may be said to be considerably prefabricated, or only to a limited extent, according to the relative size of the prefabricated elements as they arrive at the site. The extent of site assembly may be represented by the actual amount of site jointing having to be carried out. Therefore, since it is agreed that a minimum of site work is ideal, then also the largest possible sized elements, together with the least amount of site jointing (an inevitable corollary), are equally ideal.

The amount of jointing required for the assembly of the prefabricated parts of a structure increases very rapidly with every decrease in the size of elements. That this must be the case is obvious, but its extent is by no means as widely realised as might be. From Diagram 1 (graph) it may be seen that increasing the size of individual elements composing a structural unit produces a corresponding decrease in the jointing (and therefore site work involved). Additionally (Diagram 2 graph) the jointing allowance necessary *per unit area of prefabricated element* rapidly increases as the size of the element is decreased.

With prefabrication systems, particularly those based upon the use of "mass" materials, advantage is frequently taken of the possibilities of using light aggregate mixes for forming the prefabricated elements. Light mortar mixes

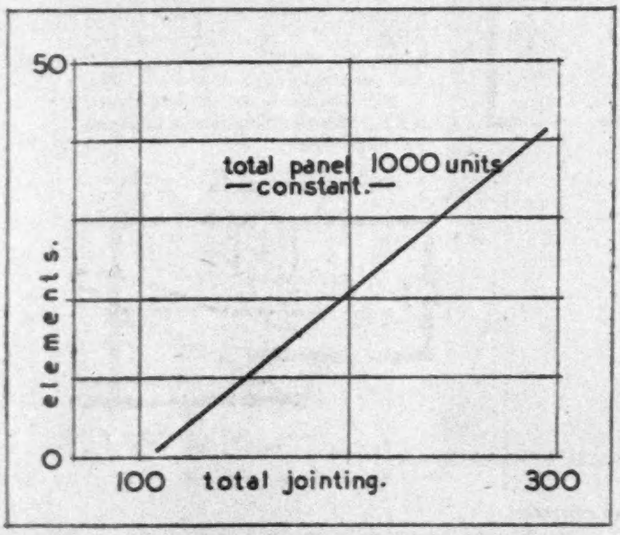


DIAGRAM 1.—Graph showing rate of increase in jointing required for a panel of constant size, as the number of elements increases.

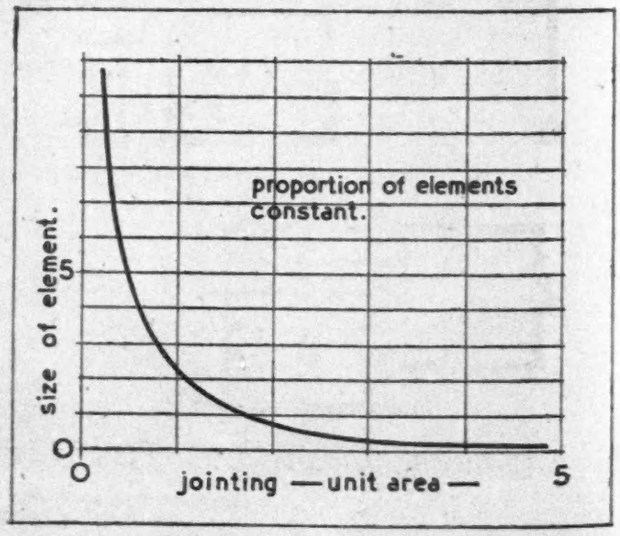
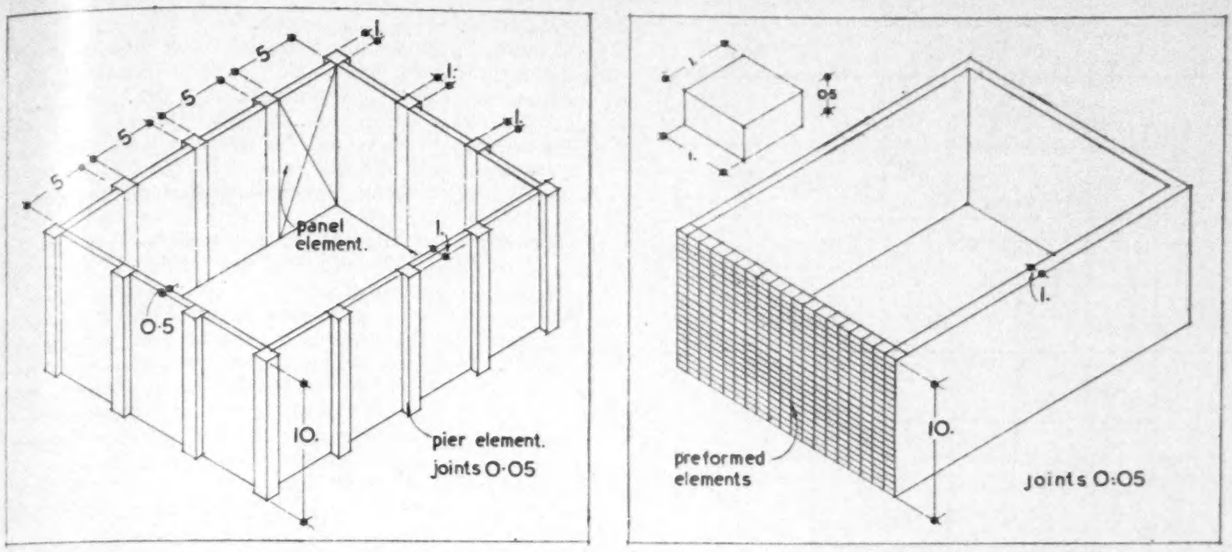


DIAGRAM 2.—Graph indicating effect of SIZE of element on the amount of jointing required for a unit area of element.



DIAGRAMS 3 and 4.—Comparative prefabricated and site constructed structures (walls only). (See text.) 3, Prefabricated. 4, *in situ*.

for jointing are less practicable, and if under these circumstances excessive jointing is necessary, much of the advantage of using the light mix may be lost.

In case it might be thought that such considerations would be negligible in practice, the following comparisons between two types of structure of a practicable type make the position clear.

Taking the case of a single, simple, single-storey structure of the emergency shop type, the difference between the *in situ* jointing work involved in the erection of structure built up of small preformed wall elements, and one based on the use of large prefabricated elements, may be examined.

Assume : a structure (fundamentally similar to that suggested for an emergency shop or store unit) of the proportions indicated in Diagram 3 having prefabricated wall elements 5 ft. by 10 ft. by 0.5 ft. between jointing piers 1 ft. square, the joints between elements being 0.05 ft. thick.

Then : for the walls of this structure the prefabricated material used will be :

14 jointing piers 10 ft. by 1 ft. by 1 ft., and

14 prefabricated panels 5 ft. by 10 ft. by 0.5 ft.

This represents a total bulk of prefabricated material of 490 cub. ft.

To assemble this part of the structure 28 vertical joints will be required to be formed *in situ* by reasonably skilled labour. Each will have to be 10 ft. by 0.5 ft. by 0.05 ft.

To this must be added an allowance for a top and bottom joint to both piers and panels.

14 panels : 28 joints 5 ft. by 0.5 ft. by 0.05 ft.

14 Piers : 28 joints 1 ft. by 0.05 ft.

Adding together these two figures and the vertical joints a total of 5.15 cub. ft. of jointing material will be seen to be required.

Thus : out of a total gross structural bulk (walls) of 495.15 cub. ft. only approximately 1 per cent. consists of jointing materials.

Compare this type of construction with an approximately equivalent *in situ* one composed of small, preformed elements, as indicated in Diagram 4, say 88 on bed.

Assume : elements 1 ft. square on bed and rising two courses to the foot high (neglecting joints), built without support piers. For simplicity no bonding is assumed ; this has no effect on the jointing allowance (except where it involves cutting elements and thus reducing their size) —Diagram 5.

Then : the total bulk of preformed material will amount to 1,760 elements each 1 ft. by 1 ft. by 0.5 ft.

This represents a total bulk of prefabricated material of 880 cub. ft.

There will be required 88 vertical joints each 0.05 ft. by 1 ft. by 10 ft. plus (21 by 0.05) ft. This amounts to 48.62 cub. ft.

Twenty-one horizontal joints each equal in length to a course of elements 1 ft. on bed and 0.05 ft. thick, will be required, amounting to 92.4 cub. ft.

The total jointing required for this structure will therefore be 141.02 cub. ft.

Thus : out of a gross structural bulk of 1021.02 cub. ft. approximately 14 per cent. consists of jointing.

It may therefore be seen that almost 14 times as much jointing is involved in a typical *in situ* preformed-element scheme as in a comparable example of full prefabrication.

Low density aggregate and other lightweight concretes of practicable use for the construction of single-storey

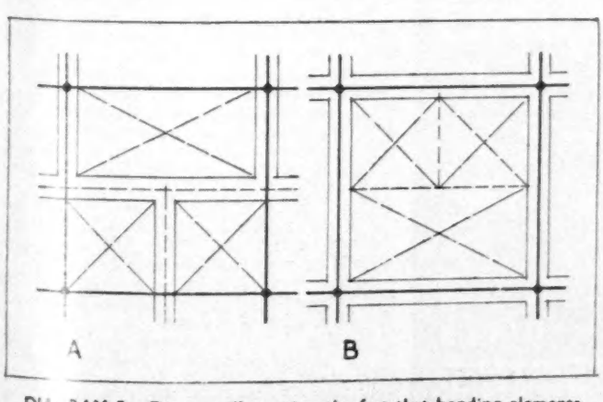


DIAGRAM 5.—Diagram illustrating the fact that bonding elements have no effect on the amount of jointing required. (See text.) Amounts of prefabricated element and jointing respectively remain the same for a given surface area whether bonded (A) or unbonded (B).

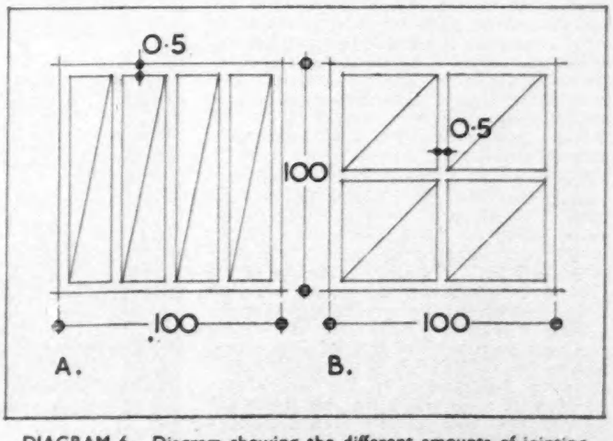


DIAGRAM 6.—Diagram showing the different amounts of jointing required for a constant area, according to whether the panels are of square or rectangular proportion. A requires 347.5 cub. units of jointing, and B 297.75 units.

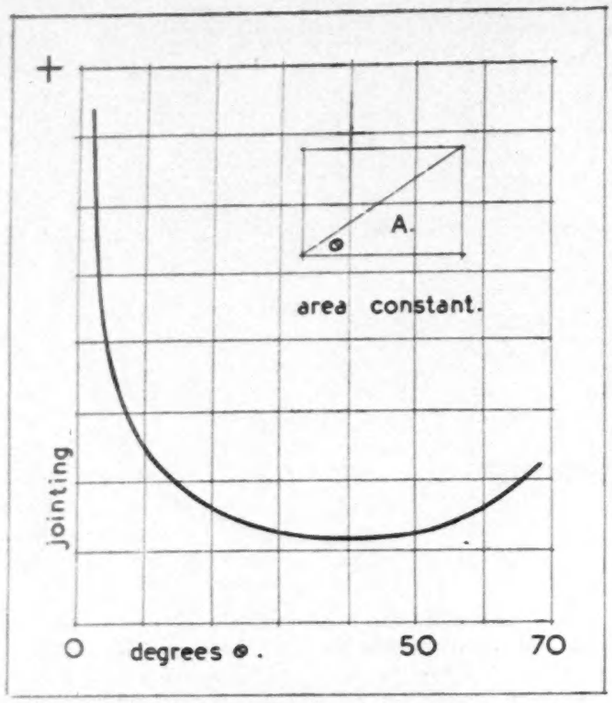


DIAGRAM 7.—Graph showing the effect of the *proportion* of an element of constant area on the amount of jointing required for its assembly.

emergency structures have densities well below that of normal cement mortar jointing compositions.

Consider a project involving the erection of 200 small shop units of the type discussed. Assume, in order to avoid any misrepresentation, that the bulk of material necessary for a prefabricated scheme and a site scheme using preformed elements would be the same. (It is, of course, highly probable that the prefabricated structure could be designed to use much less material, even allowing for dense jointing or support piers.)

Assuming: each shop unit involves a total bulk of material of 1,000 cub. ft. and that the lightweight material used for both preformed small and large prefabricated elements is one-fifth the density of the jointing material, and this latter weighs 1 cwt. per cub. ft.

Then: materials per prefabricated shop will be:

1 per cent. at 1 cwt. per cub. ft. = 10 cwt.

99 per cent. at 1/5 cwt. per cub. ft. = 198 cwt.

Therefore total weight of materials for scheme of 200 shops equals 2,080 tons. For a site-constructed shop materials will weigh: 14 per cent. at 1 cwt. per cub. ft. equals 140 cwt.; 86 per cent. at 1/5th cwt. equals 172 cwt. Therefore weight of materials for scheme equals 3,120 tons.

Thus: a saving of 1,040 tons of material to be transported may be effected by consideration of the jointing system alone.

PROPORTION OF PREFABRICATED ELEMENTS.—Just as the size of prefabricated elements used affects the amount of jointing, so does the proportion of individual elements.

Everyone is aware that of all proportions of rectangles the square has the greatest superficial area per unit of perimeter. Now, the perimeter of an element is equivalent to its surfaces to be jointed, and it is interesting to note that in the case of two identical wall areas, composed in each case of the same number of elements with the same jointing allowance per element in each case, the wall area composed of the elements which approximate more closely to a square consists of less jointing and more prefabricated element. This is illustrated in Diagram 6.

The proportion of a rectangle may be satisfactorily indicated by reference to the angle of its diagonal, and in Diagram 7 (graph) it may be seen that the additional jointing involved as a unit is changed from a square to a rectangle, having a progressively greater difference between the lengths of its sides, the perimeter (jointing) at first increases slowly, but afterwards much more rapidly.

Therefore, no great care need be exercised to avoid element proportions represented by rectangles having diagonals up to an angle of, say, 25 degrees, but beyond this the jointing needed increases rapidly.

THE STRENGTH AND DENSITY OF MATERIALS FOR PREFABRICATION. HANDLING ELEMENTS.—Having decided that the maximum-sized element possible is likely to be the most economical, it is necessary to take into account certain practical factors which set a limit to element size:

Limitations imposed by the strength of the material.

Limitations imposed by erecting equipment.

Limitations imposed by transport facilities.

The first two of these considerations were discussed last week. As far as limitations to size of elements are introduced by transport facilities, weight is far more important than bulk in most cases, and from the points discussed above it will be realised that the highly prefabricated scheme is often most likely to involve the lower gross weight of building material. (*To be continued.*)

RESERVATION OF ARCHITECTS

STATEMENT BY THE A.A.S.T.A.

THE following statement on this subject has been issued by the Association of Architects, Surveyors and Technical Assistants:—

The A.A.S.T.A. has been informed by the Ministry of Labour that its request for the reservation of architects and architectural assistants has been turned down by the Cabinet Sub-committee on the grounds that a circularisation which the Ministry of Labour had carried out showed that there were still a considerable number not engaged on work of national importance and who were willing to undertake such work.

The Secretary of the A.A.S.T.A. had previously written to Sir Walter Citrine, the General Secretary of the Trade Union Congress, asking for the support of the T.U.C. in the Association's endeavours. The reply from the T.U.C. reiterated the decision of the Cabinet Sub-committee and pointed out that it was possible for employers to apply for the deferment of military service for an architect employed upon work of national importance, adding that the Schedule of Reserved Occupations was being recast on the basis of the actual work upon which the men concerned were engaged instead of the present omnibus reservation of occupations.

There appears to be considerable difference of opinion as to the availability of architects and architectural assistants. The experience of the A.A.S.T.A. through its Employment Register shows that since October last, for 203 vacancies the Association has only been able to put forward 43 names. The experience of local authorities and others seeking assistants also confirms this shortage. In the light of this it is questionable whether the answers to the circularisation carried out by the Ministry of Labour really represent the true situation. The anomalies revealed in the working of the Central Register may equally be revealed in the case of this circularisation, if closer examination were made.

The A.A.S.T.A. does not consider that deferment of military service is a satisfactory method of retaining indispensable men, but welcomes this change in the method of reservation, for it should mean that those engaged on work of national importance and are irreplaceable will be reserved. At the same time it does not allow for any reserve of skilled technicians to meet the very real threat of intensive bombing.

The A.A.S.T.A. now intends to press for the protection of such work as A.R.P., bomb damage survey, etc. The Association also intends to urge that students be allowed to complete their education in a profession that will be called upon to the utmost to make good the devastation of the war.

The Association has recently received a copy of the revised Schedule of Reserved Occupations from the T.U.C. for comments and criticisms. In its reply it will be possible to put the Association's viewpoint and make representations for such alterations to the revised Schedule so that it will satisfy the building requirements of national work and end the present chaotic situation.

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35-59

OBITUARY

E. J. May, F.R.I.B.A.

A direct link with Decimus Burton (1800-1881) is broken by the death of Mr. Edward John May, which took place on March 16, at the age of 87. Mr. May was articled to Burton, who, as is widely known, was one of those at the meeting in 1834 when the R.I.B.A. was first conceived. Such was the respect and affection in which Mr. May held his old master that for over half a century, on the anniversary of his first arrival, he paid a visit to Burton's office in Spring-gardens, though for many years past it had been a Government office.

On the completion of his articles (during which period also he attended the R.A. Schools) May went into Norman Shaw's office, and it was while there, in 1876, that he won the Pugin Studentship. Through Shaw, May became architect to the newly formed Bedford Park Estate, where he took up his residence and designed the social club building. This work at Bedford Park led to a considerable domestic practice in which his bent for designing in simple and restrained fashion served him well. Perhaps the best of these houses were Jardine Hill, near Dumfries, and "Barnsdale," near Oakham, but it also showed to advantage in Swarland Hall, Northumberland; Kirklevington Grange, Yarmouth; "Honeyhanger" and "Hilders," Haslemere; "Webbington," Somerset (house, stables, kennels), etc. Other buildings designed by him included St. Nicholas Hospital Home and St. Martin's Home for Crippled Boys, Pyrford; and the Babies' Home, Plymouth. It was a source of grief to him that he never had the opportunity to build a church.

Mr. May became Associate R.I.B.A. in 1881 and Fellow in 1887, but along with Norman Shaw and others he resigned in 1892 over the Institute's Registration policy, but rejoined with the rest of the "rebels" in 1906. He was resolutely opposed to competitions and did not court public work, but held a number of appointments, among them those of architect to the Church of England Waifs and Strays Society and architect and surveyor to the Governesses' Benevolent Institution. He was a member of the Art Workers' Guild.

A friend writes of him: "Towards his pupils, assistants, clients and builders he was always the same unruffled master of himself, though in a quiet way he could be more severe than any blusterer. His fairness in every dealing was crystal clear, and his perpetual joy and interest in those around him revealed a master in the art of living."

H. W. Gaze.

Mr. Henry William Gaze, managing director of Messrs. W. H. Gaze and Sons, Ltd., died suddenly on March 7, aged 64. He was a son of the late Mr. W. H. Gaze, founder of the firm in 1874.

Ernest Hirsch.

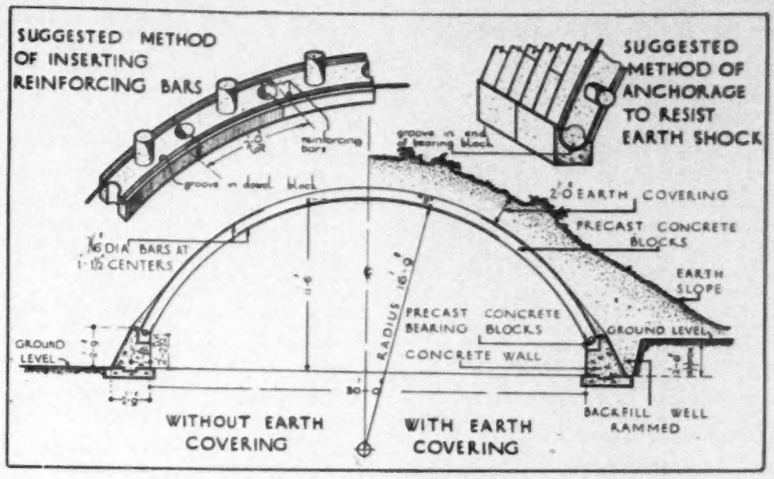
We regret to record the death on March 24, at the age of 80, of Mr. Ernest Hirsch, late Chairman of the Kleine Co., Ltd., New Oxford House, Bloomsbury, W.C.

WORKS AND BUILDINGS

(*Continued from page* 313.)

Mr. Bossom urged a thorough overhaul of the building industry. What was being done for the workers who had been "blitzed"? This situation had to be met by some temporary expedient in construction which could be wiped out, if necessary, after the war. They could not wait for town planning schemes. The plans and the material for post-war rebuilding must be made now, and the people arranged for. He hoped the Minister had worked out his plans so that it would be possible to put up these temporary buildings without using materials from abroad. There was said to be plenty of cement. There were many materials, like gypsum for instance, which could be used for buildings that were not permanent. The buildings would not need heavy foundations; the walls could be treated with roughcast, and they would stand from three to five years quite satisfactorily. The Minister should take up matters with the architects, so that they might make the necessary provision for the work to be done with speed, and he should arrange for contractors in the different regional areas to be ready, and so not have to disturb other vital work. He should have pools of labour so as not to disturb progress on other necessary buildings, such as munition factories.

Mr. Hicks, in reply, said that the Minister of Works and Buildings had made an examination into this problem and was much concerned to provide temporary alternative accommodation for the "blitzed" workers. Architects had been consulted and other experts, as well as all the Government Departments. He was certain that by the end of the week they would have final approval for the plans and elevations; materials would be used which it would not be necessary to bring from abroad, and speedy reconstruction would take place. They had planned to cover accommodation for a possible 200,000 people.



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CENTRELESS ARCH DESIGN

WARTIME BULLETIN NO. 14.

In war time, problems of building have to be solved in a variety of ways, the choice being governed by the requirements of the building and the materials most readily available at the particular time and place. Design and use must therefore be flexible. The centreless-arch construction described in Wartime Building Bulletin No. 14, just issued by the Building Research Station of the Department of Scientific and Industrial Research (H.M. Stationery Office, 1s.), is an example of a method of building which requires no timber and little steel; and where resistance to earth tremors, *e.g.*, from explosions or earthquakes, is not required, steel can be dispensed with altogether.

The method of construction was described in general terms in Wartime Building Bulletin No. 6, noticed in our issue for July 12, 1940. A number of arch buildings of this type have already been erected. The purpose of the present Bulletin is to give detailed information of the design and construction of segmental arches of this type. Notes and design curves are given covering the design of segmental arches for any span and clearance conditions. The method of design is simple and is fully illustrated by an example. Although a semi-circular shape is practicable, a segmental shape gives greater economy and stability. Notes on wall and footing construction are also given. Briefly, the construction consists of a series of arch rings made up of precast concrete blocks. The blocks are provided with lugs and recesses which enable the arch to be built ring by ring, using the already erected rings as a support for new ones, the first ring being supported on the end wall. Grooves are provided in the blocks for the insertion of such steel reinforcement as may be required. By the provision of a raised rim on the periphery of the blocks, the joints can be grouted after the blocks have been placed, so that the blocks do not have to be mortared before being put into place. The arches can be used for protected workshops, shelters, hutments, etc., and the standards of overhead and lateral protection required by the Code issued by the Ministry of Home Security can be readily satisfied. The construction can be undertaken by semi-skilled labour, and the cost compares favourably with that of other structures offering similar advantages, particularly as regards protection.

Four typical examples of buildings incorporating centreless arches are given, each of which can be constructed either as a surface hutment or semi-sunk with overhead earth cover.

The application of the centreless arch to factory construction is illustrated.

Goods Chargeable with Purchase Tax.

The Commissioners of Customs and Excise have issued Notice No. 78, March, 1941, which gives a list complete at that date of goods chargeable with Purchase Tax. This supersedes Notice No. 78, dated September, 1940. Copies may be obtained from the Secretaries' Office, Customs and Excise, City Gate Chambers, Finsbury-square, E.C.2.

A.R.P. SCHEMES

LONDON.

Chislehurst and Sidcup.—U.D.C. placed contract with E. and L. Berg, Kingston-by-Pass, Hinchley Wood, Esher, at £2,975 for public surface shelters in reinforced brickwork with reinforced concrete roofs. Plans by Edgar Lawes, F.S.I., M.Inst.M. and Cy.E., Eng and Sur.

Coulsdon and Purley.—U.D.C. to make application to M.H. for consent to loan of £8,640 for wardens' posts £598; public shelters £2,760; domestic shelters £4,376; washdown at cleansing stations £206; new cleansing station, Coulsdon £400; and watch room over trailer pump store £300.

Erith.—T.C. placed contract with S. W. Farmer and Son, Ltd., Lewisham, S.E., at £1,270 14s. for strengthening public shelters. —Plans passed: shelter, for W. R. Edge; shelter, for R. G. Hopkinson; garages for A.F.S. vehicles and wardens' quarters for T.C.

Hayes and Harlington.—U.D.C. placed contract with F. Bradford and Co., Ltd., for shelter for 1,050 persons.

Lewisham.—B.C. to provide additional gas cleansing centre at £2,500.—Tenders to be considered for protective buildings at two depots, and Council also accepted tender for other protective building at a depot. O. Parratt, quantity surveyor.—Tenders being invited for lavatories in public shelters.

Paddington.—Regional Commissioners intimated to B.C. that they are prepared to consider proposals for installation of electric heating in all shelters accommodating 50 or more persons, where circumstances permit.

Southgate.—T.C. to purchase from Lilly-white and Co., of Andover, three huts for A.R.P. use at £336.—Six wardens' posts to be erected by Stapleton and Son, Ltd., and W. E. Silk, Ltd. (three posts each) at £351 5s. and £337 10s. respectively.

PROVINCIAL.

Atherton.—U.D.C. to erect additional brick surface communal shelters for 1,935 persons Plans by F. L. Boydell, Sur.

Bedlingtonshire.—U.D.C. accepted tenders of Sowerby's, 1, Framlington-pl., Newcastle-on-Tyne, 2, and G. Towers and Son, Ltd., Union-st., Blyth, for 77 domestic surface shelters. Plans by W. Hall, Eng. and Sur.

Billingham-on-Tees. — U.D.C. appointed committee to consider additional office accommodation for A.F.S.—J. H. Hill, Sur., prepared plans for shelter for 50 people.—Shelter proposed at recreation ground.

Blackburn.—R.D.C. to erect brick surface domestic shelters in rural area. Plans by L. Brothers, Sur.

Bolton.—E.C. propose additional school shelters for 3,208 at £15,220.

Bridlington. — W. H. Williamson and Sons, St. Wilfrid-rd., Bridlington, secured contract for nine public shelters, for T.C. Plans by A. Everingham, Boro. Eng.

Brighouse.—T.C. to build 300 brick communal shelters. No contracts let. Plans by Boro. Eng., Commercial-st.

Caernarvonshire.—E.C. to erect shelters at 180 schools. Plans by W. Ll. Jones (L.), County Architect, Caernarvon.

Castle Ward.—R.D.C. accepted tenders of J. Rogers, North Shields, for 26 shelters and of Sowerbys (Contractors), Ltd., Ridley-pl., Newcastle, for 39 shelters.

Chapel-en-le-Frith.—For reinforced brickwork domestic communal shelters at Dove Holes, R.D.C. placed contract with C. Green and Son, Chapel-en-le-Frith, Stockport, at £502. Plans by T. Dinsdale, Eng. and Sur.

Chester.—Senior Regional Officer approved £380 for protection for wardens' posts.

Coseley.—U.D.C. propose improvement of 384 shelters.

Coventry.—T.C. propose domestic surface shelters at £125,000 and trench shelters at £33,000, extensions to school camps for evacuee children at £11,000, and protective work on public buildings, £5,000. Plans by D. E. E. Gibson, M.A., City Architect, 1a, Warwick-row.

Crewe.—T.C. to construct tunnel shelter. Plans by L. Reeves, Boro. Sur.

Darlington.—R.D.C. received approval for shelters at Heighington. Plans by W. Pallister, Sur.

Gosforth. — U.D.C. propose feeding and shelter centre at Coxledge. Plans by Clifford Hyde, Sur.

Heswall.—U.D.C. to erect surface communal shelters in Pipers-la.

Higham Ferrers.—Childs and Co., Wellingborough-rd., Finedon, received contract for 19 communal surface shelters and building 14-in. brick baffle walls for A.R.P. protective works at £263 per block of 4 shelters and 17s. 6d. per super yard of wall for T.C. —T.C. approved: shelter to boot factory, Walker and Gunn, Ltd.

Hornchurch.—Minister of Home Security to recognise £964 12s. for provision and equipping of decontamination station at City of London Corporation tip.

Hyde.—T.C. propose installing bunks in public trench shelters, surface shelters and basement shelters and additional brick surface shelters at £29,878, and other A.R.P. improvements at £2,000.

Lincolnshire (Lindsey). — C.C. accepted tender submitted by Sculpham and Son, Willingham-rd., Market Rasen, for communal shelters at Market Rasen and tender submitted by J. H. Turner and Sons, Barkham-st., Wainfleet, for public shelters at Spilsby. Plans by P. W. Birkett (A.), County Architect, Lincoln.

Macclesfield.—M.H. has approved £800 for brick protective walls at infirmary buildings for Board of Infirmary.

Middleton.—T.C. propose first-aid post garage accommodation and garages.

Newcastle-under-Lyme. — R.D.C. propose first-aid post in Audley.

Newcastle-upon-Tyne.—R. Gallacher, Ltd., Cemetery-rd., Blackhill, Co. Durham, contractors for shelters at Shotley Bridge Homes for City Council.

Sedgefield. — R.D.C. received consent to build 62 communal shelters at £3,789.

Wallsend-on-Tyne. — T. Clements and Son, Selbourne-gdns., Newcastle, contractors, for shelters.

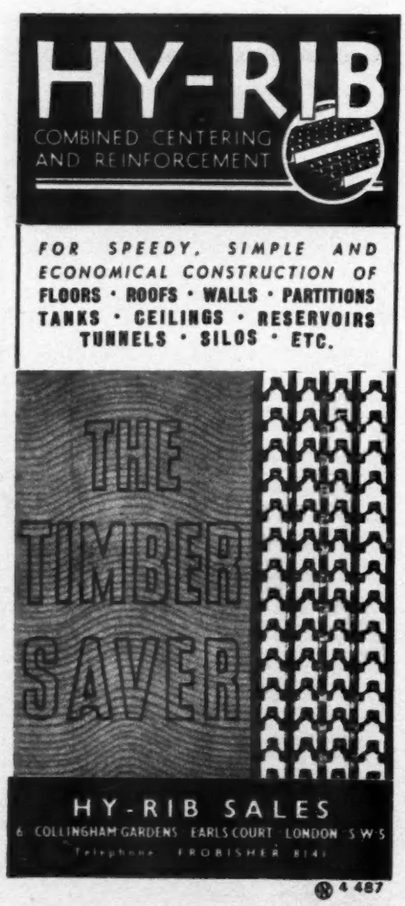
West Hartlepool.—E.C. to build additional shelters at school. No. contracts let.

West Riding.—E.C. propose A.R.P. protective work at junior mixed and infants' school, Harden, and at Aire View school, Silsden, at £409.

Worksop.—T.C. placed contract for approx. 500 reinforced brick and concrete domestic surface shelters, with Hewitt and Maughan, Ltd., 36, Carlton-av., Worksop, at following prices: 12 persons type, £100; 24 persons £150; 36 persons £225; 48 persons £276; 6 persons £77 10s.; and 18 persons £130. Plans by C. O. Allsopp, M.Inst.M. and Cy.E., Boro. Eng.

SCOTLAND.

Elgin. Corporation to erect shelters at Grayfriars-st. Architect, G. N. Blain, Municipal Offices.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BOOK REVIEW

Reinforced Concrete Chimneys. By C. Percy Taylor, F.C.G.I., M.Inst.C.E., and Leslie Turner, B.Sc., M.Inst.C.E. London: Concrete Publications, Ltd., 14, Dartmouth Street, Westminster, S.W.1. Price 8s. 6d.

Although reinforced concrete chimneys have been built in large numbers for the past forty years or more, there has been no book on this subject until the one under notice. The authors have been responsible for the design of many reinforced concrete factory chimneys; they also have in their care chimneys built thirty or so years ago, and have thus been able to observe the behaviour of the structures over a long period of years, and to profit by earlier mistakes.

The book deals with design and construction, including foundations, flue openings, fittings, and other details, all of which are illustrated with practical details. A valuable feature is the authors' recommendations on reinforcement against temperature stresses, which are based on investigations made over a long period of years and controvert the assumptions made by previous investigators. A new formula is given for the temperature differences in the shell. Another chapter deals with the stresses due to weight and wind. Following full explanations of the problems involved, a numerical example of the complete design of a section of a chimney is given; and, as a number of involved formulæ occur in chimney design, large-scale graphs are included from which the results can be readily obtained. Working drawings are also given of some typical chimneys. Many of the earlier reinforced concrete chimneys suffered from defects in design which resulted in cracks; the authors show how this trouble can be avoided by the scientific calculation, based on actual experience in chimneys, of the stresses caused by hot gases.

LAW REPORT

SUMMONS BY IRON AND STEEL CONTROL.

R. v. Ascot Gas Water Heaters, Ltd.

THE following report is issued by the Iron and Steel Control, Ministry of Supply:—

At Willesden recently the Ascot Gas Water Heaters, Ltd., were fined £20 for acquiring 18 tons 12 cwt. of steel worth £575 without a licence, and £20 for making a false statement to obtain the steel. The summonses were under the Ministry of Supply Control of Iron and Steel Order.

Mr. H. A. K. Morgan, prosecuting, said that the defendants were largely engaged in Government work. Last May they were anxious to extend their factory premises, and for this work it was necessary that they should acquire some steel. "It is vital," said Mr. Morgan, "that the limited supplies of steel in the country should be allocated in the best possible way. Accordingly, by the Control of Iron and Steel Order, the Ministry of Supply had made it necessary to obtain a licence before getting any steel. It was the prosecution's contention that the firm had no such licence and that to acquire the steel they quoted a symbol or reference number of an Air Ministry contract which, they stated, entitled them to acquire steel. In fact, it dealt with an entirely different matter. Mr. Morgan went on to say that he had no doubt the extension was needed, but it was not for the firm to decide what was in the nation's interests, but for the Control. The authorities, concluded Mr. Morgan, regarded it as a serious matter, because it was becoming a common practice for firms to get steel in this way by quoting symbol numbers. It was a practice that must be stopped.

For the defence it was stated that the firm had placed no direct orders for steel, and that the extension was needed for storage purposes for vital work. The chief assistant to the constructional engineers asked Mr. Alexander Peake, the firm's technical manager, for a priority number with which to obtain the necessary steel, and was referred to Mr. Milligan, maintenance engineer, who said he gave the firm's authority number to him and acted in good faith.

A stay of execution was granted pending a possible appeal.

CONTRACTS OPEN

For some contracts still open, but not included in this list, see previous issues. Those with an asterisk are advertised in this number. The dates at the head of paragraphs are those for the submission of tenders; a dagger (†) denotes closing date for applications; the name and address at the end refer to the person from whom particulars may be obtained.

BUILDING.

MARCH 29.

Blofield and Flegg R.D.C.—Alterations and additions to offices at Acle. E. Boardman and Son, Queen-st., Norwich. Dep. £1 1s.

Wednesbury T.C.—Heating and lighting of school shelters. A. Booth (F.), Boro' Architect. Dep. £2 2s.

MARCH 31.

Belfast T.C.—Shelters. City Surveyor's Dept. (Engineering Section), Room 94, City Hall. Dep. £1 1s.

Blackpool T.C.—Brickwork protection at first-aid posts. Boro. Eng. and Sur.

Ellesmere Port U.D.C.—Demolition and re-erection of 213-224, Princes-rd. P. J. Hodges, Clerk. Dep. £1 1s.

Stourbridge T.C.—Domestic surface shelters, Contract 23. G. N. Maynard, Boro. Eng. and Sur.

Westmorland C.C.—Alterations and additions to Kirkby Stephen council school. H. B. Greenwood, clerk, Kendal.

APRIL 1.

†**Devon C.C.**—Building works and repairs at 12 institutions; also at 5 children's homes. H. V. de Courcy Hague, County Architect, 97, Heavitree-rd., Exeter.

APRIL 2.

†**Bexley T.C.** — Central fire station. G. A. Joy, F.S.I., M.Inst.M. and Cy.E., Council Offices. Dep, £2 2s.

APRIL 3.

Penybont R.D.C.—Fire station at Aberkenfig. Simon Davies, Sur. Dep. £2 2s.

APRIL 4.

Bedford T.C.—Dismantling of four existing portable huts situate at Ampthill-rd. schools, Bedford; removal to and re-erection at Silver Jubilee schools, London-rd., Bedford, and for construction of nine surface shelters at schools. C. H. Blakeway, Boro. Eng. and Sur.

APRIL 5.

Armagh T.C. Reroofing of two large stores in Shambles Market Yard. V. M. Conran, Town Clerk.

Carshalton U.D.C.—Domestic shelters in reinforced brick work. R. S. Davey, Eng. and Sur. Dep. £2 2s.

Wednesbury E.C.—Heating and lighting of school shelters. A Booth, Boro. Architect. Dep. £2 2s.

West Riding E.C.—Conversion of offices at Lound girls' and infants' schools, Chapeltown. A Rayner, Education Office, Nether House, Greenside, Sheffield.

APRIL 7.

Brighouse T.C.—Extension to coke storage at gas works. Boro. Eng., Commercial-st. Dep. £1 1s.

Dartford T.C.—Relining of trenches at four sites. Boro. Sur., Barclays Bank-chams. Dep. £2 2s.

APRIL 8.

Leitrim Board of Health.—14 houses. McDonnell and Dixon, architects, 20, Ely-pl., Dublin.

APRIL 9.

Bristol E.C.—Alteration and adaptation of existing premises for conversion into emergency kitchen. J. N. Meredith, City Architect, Eagle House.

NO DATE.

Caernarvonshire E.C.—Shelters for all schools in Bangor and Bethesda districts. W. Lloyd Jones, County Architect, Caernarvon.

PAINTING, ELECTRIC LIGHTING, HEATING, &c.

MARCH 31.

Leeds T.C.—Cleaning down, painting, etc., police stations and fire brigade premises. W. S. Cameron (A.), City Eng.

North Cotswold R.D.C.—External painting 132 houses. J. E. Busfield, Sur.

West Riding E.C.—Asphalting playground of Snysdale-rd. school, Cudworth. G. J. Gibbs, Divisional Clerk, Cudworth.

West Riding E.C.—Repairs to playground, Castleford Ashton-rd. modern school, and conversion of offices, Castleford Wheldon-la. school. M. G. Swaine, Divisional Clerk, Education Offices, 97, Smawthorne-la., Castleford.

APRIL 1.

†**West Riding C.C.**—Repairs and painting to police buildings. Acting West Riding Architect, County Hall, Wakefield.

APRIL 2.

Newcastle-upon-Tyne T.C.—External painting 1,014 houses. City Architect, 13, Cloth Market.

APRIL 4.

Maltby U.D.C.—External painting 180 houses, etc. M. R. Jones, Eng. and Sur.

APRIL 5.

Bridge-Blean R.D.C.—External painting of various properties. R. Miles, Building Sur., Old Dover-rd., Canterbury.

West Riding C.C.—Provision of a water supply from main road to Council school, and certain fittings at Upper Poppleton. H. Hall, Education Officer, Knaresborough.

APRIL 7.

Bingham R.D.C.—Painting the external wood and iron work of 95 houses. C. W. Kendrick, Sur. Dep. 10s.

Neath R.D.C.—Repairs to 1—8, 9a and 9, Siding-ter., Skewen. J. T. Jones, Eng. and Sur., 18, Orchard-st. Dep. £1 1s.

Newmarket R.D.C.—External painting 52 cottages. A. E. Austin, Building Sur.

NO DATE.

Wigan and District Mining and Technical College.—External painting. J. F. S. Ross, Principal. Dep. 5s.

MATERIALS.

The materials for which tenders are invited normally include one or several of the following:—asphalt, bricks, brooms, building lime, cast-iron pipes, cement, stoneware pipes, granite chippings, granite kerbs, gravel, gulleys, lime, manhole covers, painters' materials, plumbers' materials, road stone, slates, sand, stone, tar, tarsing and bituminous macadam, timber, and whinstone screenings. Readers should obtain full particulars by personal inquiry.

MARCH 29.

Armagh U.D.C.—V. M. Conran, Town Clerk.

Eton R.D.C.—Sur.

MARCH 31.

Altrincham T.C.—Boro. Sur.

Cardiganshire C.C.—J. Davies, County Sur.

Monmouthshire C.C.—S. A. Bennett, County Sur., Bassaleg-rd., Newport.

Ramsey (Hunts) U.D.C.—A. Gilding, Clerk.

Washington U.D.C.—N. C. Harrison, Sur.

APRIL 2.

Camborne-Redruth U.D.C.—Sur., 2, Station Hill.

APRIL 3.

Blaydon U.D.C.—Sur.

APRIL 4.

Bath Corporation.—Deputy City Eng.

South African Railways and Harbours Administration. — High-pressure steam jointing in sheets. Chief Stores Superintendent, Purchase Section, Room 8, Johannesburg. Apply also Dept. of Overseas Trade, S.W.1 (Ref. No. T.15962/41).

APRIL 5.

Haslemere U.D.C.—C. A. Best, Sur.

Northwich U.D.C.—F L. James, Sur.

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ENGINEERING, IRON AND STEEL.

APRIL 2.

South Africa. — Pipe-work equipment for the power-station, for Pretoria T.C. Merz and McLellan, consulting engineers, 32, Victoria-st., London, S.W.1. Dep. £5 5s.

APRIL 15.

West Dean R.D.C. — Covered concrete storage reservoir and provision, laying and jointing of about 640 lin. yds. of 8 in. dia. iron and steel delivery mains, together with fittings and other incidental works. Willcox, Raikes and Marshall, engineers, 33, Great Charles-st, Birmingham, 3. Dep. £5 5s.

ROAD, SEWERAGE AND WATER WORKS.

MARCH 31.

Richmond (Yorks) T.C.—Surface dressing of roads. Boro. Sur.

Surbiton T.C.—Laying of approximately 1,896 super yards of 2in. concrete slab paving in Raleigh-dr. and Warren-dr. Tolworth. Boro. Eng. and Sur.

Walthamstow T.C.—Making-up in tarmacadam on hardcore foundation of Sutherland-rd. T. S. Cunningham, Boro. Eng. and Sur.

Withnell U.D.C. — Tar-spraying for year ending March 31, 1942. C. L. Gregson, Sur.

APRIL 1.

Scarborough T.C.—Resurfacing with asphalt macadam of part of Seamer-rd. H. V. Overfield, Boro. and Water Eng.

APRIL 2.

Hackney, Islington, St. Pancras and Stoke Newington B.C.'s—Removal of tramways and reinstatement of roads. E. J. Elford, Consulting Eng. to Councils, 84, Eccleston-sq., Westminster, S.W.1. Dep. £2 2s.

APRIL 4.

Fofar T.C.—Resurfacing, etc., of Lochside-rd. Burgh Sur.

APRIL 5.

Reigate T.C.—Surface dressing approx. 174,000 yds. super. Boro. Sur.

APRIL 7.

Fife C.C.—Providing and laying spun cast-iron water main. H. F. Hodge, County Eng., 34, Viewfield-ter., Dumfermline. Dep. £1 1s.

Manchester T.C.—Drainage of Southern Cemetery extension. City Eng. Dep. £1 1s.

Sutton and Cheam T.C.—Surface dressing with refined tar of approximately 400,000 sq. yds. of roads. N. H. Michell, Boro. Eng. and Sur.

APRIL 9.

Torpoint U.D.C.—Works in Treval-rd. Eng. and Sur. Dep. £2 2s.

Winchester T.C.—Surface dressing of roads. P. H. Warwick, City Eng. and Sur.

BUILDING ILLUSTRATED

FIRE STATION IN KENT.

For this fire station in Kent, designed by Messrs. L. A. Culliford and Partners, the builder was Mr. V. R. Stotesbury. Subcontractors were: Sussex Brick Co., Ltd., facing bricks; Ightham Brick and Tile Co., Ltd., common bricks; Buchanan and Curwen, Ltd., electrical installation; T. S. Knight and Sons, Ltd., central heating; R. E. Pearse and Co., Ltd., metal windows; B.R.C. Engineering Co., Ltd., reinforcement for r.c. floor slab; Redpath Brown and Co., structural steelwork; Limmer and Trinidad Lake Asphalte, asphalt roofs; Bratt Colbran, Ltd., fireplaces; Stitson White and Co., Ltd., sanitary fittings; Merchant Trading Co., doors; Inlaid Rubeleum Tile Co., Ltd., battleship linoleum; Eastwoods, roof tiling; Yannedis and Co., Ltd., door furniture and ironmongery; E. Hill Aldam and Co., Ltd., sliding door gear; South Suburban Gas Co., gas fittings and service; Bromsgrove Guild, Ltd., wind vanes; Frederick Sage and Co., Ltd., lettering; Milton Syer, Ltd., boiler; Merryweather and Sons, Ltd., exhaust outlets; Sun Electric Co., Ltd., outside lamps; and Cashmore Art Workers, Rainwater heads.

Change of Name.

Windsor Floors, Ltd., announce that the company has recently changed its name to Windsor Constructions, Ltd., in order to reflect the broadened type of activity, viz., civil engineering and general building work, in which the company is now operating. Reinforced concrete and flooring work will continue to form part of its activities, and the management of the company remains unchanged. The head office is Windsor House, 98, London-road, Mitcham.

RATES OF WAGES IN THE BUILDING TRADE

AS AND FROM 1st FEBRUARY, 1941

[Every endeavour is made to ensure accuracy, but we cannot be responsible for errors]

	Crafts-men.	Lab-ourers.		Crafts-men.	Lab-ourers.		Crafts-men.	Lab-ourers.		Crafts-men.	Lab-ourers.
Aberavon	1/10	1/5½	Clitheroe	1/10	1/5½	Isle of Thanet	1/8	1/3½	Saxmundham	1/8½	1/2½
Aberdare	1/10	1/5½	Cobham (Surrey)	1/9	1/4½	Isle of Wight	1/7½	1/3½	Scarborough	1/9½	1/4½
Abergavenny	1/10	1/5½	Colchester	1/9½	1/4½	Keighley	1/10	1/5½	Scunthorpe	1/10	1/5½
Abingdon	1/8½	1/4	Colwyn Bay	1/9	1/4½	Kenilworth	1/10	1/5½	Selby	1/10	1/5½
Accrington	1/10	1/5½	Congleton	1/9½	1/4½	Kettering	1/10	1/5½	Sevenoaks	1/8½	1/4
Aldeburgh	1/6½	1/2½	Coventry	1/10	1/5½	Kidderminster	1/9½	1/4½	Sheerness	1/8	1/3½
Aldershot	1/8½	1/4	Cranbrook	1/8	1/3½	King's Lynn	1/8	1/3½	Sheffield	1/10	1/5½
Alfreton	1/10	1/5½	Cranleigh	1/8	1/3½	Kirkham	1/10	1/5½	Shipley	1/10	1/5½
Alnwick	1/9½	1/4½	Crawley	1/8	1/3½	Knowle	1/9½	1/4½	Shoeburyness	1/9½	1/4½
Altrincham	1/10	1/5½	Crewe	1/9½	1/4½	Lancaster	1/10	1/5½	Shoreham	1/9	1/4½
Amble	1/9½	1/4½	Cromer	1/7	1/3	Leamington	1/10	1/5½	Shrewsbury	1/9½	1/4½
Amersham	1/8½	1/4	Crowborough	1/8	1/3½	Leatherhead	1/9	1/4½	Sittingbourne	1/8	1/3½
Ammanford	1/10	1/5½	Cuckfield	1/8	1/3½	Leeds	1/10	1/5½	Skegness	1/9	1/4½
Andover	1/8	1/3½	Darlington	1/10	1/5½	Leicester	1/10	1/5½	Sleaford	1/8½	1/4
Ardingley	1/8	1/3½	Darwen	1/10	1/5½	Leighton Buzzard	1/7	1/3	Slough	1/9	1/4½
Arundel	1/8	1/3½	Daventry	1/8½	1/4	Letchworth	1/9	1/4½	Southampton	1/9½	1/4½
Ascot	1/8	1/3½	Deal	1/8	1/3½	Lewes	1/8	1/3½	Southend-on-Sea	1/9½	1/4½
Ashby-de-la-Zouch	1/10	1/5½	Denbigh	1/9	1/4½	Lichfield	1/9	1/4½	Southport	1/10	1/5½
Ashford (Kent)	1/8	1/3½	Derby	1/10	1/5½	Lincoln	1/10	1/5½	South Shields	1/10	1/5½
Ashford (Middlesex)	1/10	1/5½	Devizes	1/7	1/3	Littlehampton	1/8	1/3½	Spalding	1/8	1/3½
Ashington	1/9½	1/4½	Dewsbury	1/10	1/5½	Liverpool	‡2/-	¶	Stafford	1/9½	1/4½
Ashtead	1/10	1/5½	Didcot	1/8	1/3½	Llandudno	1/9	1/4½	Staines	1/9	1/4½
Ashton-under-Lyne	1/10	1/5½	Diss	1/6½	1/2½	Llanelly	1/10	1/5½	Stamford	1/9	1/4½
Aylesbury	1/8	1/3½	Doncaster	1/10	1/5½	London—			Stevenage	1/9	1/4½
Aylsham	1/7	1/3	Dorchester	1/7½	1/3½	12m. radius	*1/11½	1/6½	Stockport	1/10	1/5½
Bagshot	1/8	1/3½	Dorking	1/8½	1/4	12-15 m. radius	*1/11	1/6	Stockton-on-Tees	1/10	1/5½
Banbury	1/8	1/3½	Dover	1/8	1/3½	Long Eaton	1/10	1/5½	Stoke-on-Trent	1/10	1/5½
Barnsley	1/10	1/5½	Dovercourt	1/8	1/3½	Longton	1/10	1/5½	Stourbridge	1/10	1/5½
Barnstaple	1/8	1/3½	Driffield	1/8½	1/4	Loughborough	1/10	1/5½	Stourport	1/9½	1/4½
Barrow-in-Furness	1/10	1/5½	Droitwich	1/9½	1/4½	Louth	1/8½	1/4	Stowmarket	1/7	1/3
Barry	1/10	1/5½	Dudley	1/10	1/5½	Lowestoft	1/8	1/3½	Stratford-on-Avon	1/9	1/4½
Basingstoke	1/8	1/3½	Dunstable	1/8½	1/4	Luton	1/9½	1/4½	Stroud	1/9	1/4½
Bath	1/9½	1/4½	Durham City	1/10	1/5½	Macclesfield	1/9½	1/4½	Sunderland	1/10	1/5½
Batley	1/10	1/5½	Eastbourne	1/9	1/4½	Maidenhead	1/9	1/4½	Sutton Coldfield	1/10	1/5½
Beaconsfield	1/8½	1/4½	E. Glam. (Mon.Val.)	1/10	1/5½	Maidstone	1/8½	1/4	Swaffham	1/6½	1/2½
Beccles	1/6½	1/2½	East Grinstead	1/8	1/3½	Malvern	1/8½	1/4	Swanage	1/8	1/3½
Bedford	1/9½	1/4½	Edenbridge	1/8	1/3½	Manchester	1/10	1/5½	Swansea	1/10	1/5½
Berkhamsted	1/8	1/3½	Ely	1/7	1/3	Manningtree	1/7	1/3	Swindon	1/8½	1/4
Berwick	1/9½	1/4½	Epping	1/10	1/5½	Mansfield	1/10	1/5½	Tamworth	1/9½	1/4½
Beverley	1/10	1/5½	Exeter	1/9½	1/4½	March	1/7	1/3	Taunton	1/8½	1/4
Bexhill-on-Sea	1/8½	1/4	Exmouth	1/8½	1/4	Margate	1/8	1/3½	Tenterden	1/8	1/3½
Bideford	1/8	1/3½	Fakenham	1/7	1/3	Market Harborough	1/9	1/4½	Thames Haven	1/10	1/5½
Biggleswade	1/8	1/3½	Falmouth	1/8½	1/4	Matlock	1/8½	1/4	Thetford	1/7½	1/3½
Billericay	1/7½	1/3½	Fareham	1/9	1/4½	Melton Constable	1/6½	1/2½	Thorpe Bay	1/9½	1/4½
Birchington	1/8	1/3½	Faversham	1/8	1/3½	Melton Mowbray	1/9	1/4½	Todmorden	1/10	1/5½
Birkenhead	‡2/-	¶	Felixstowe	1/9	1/4½	Merthyr	1/10	1/5½	Tonbridge	1/8½	1/4
Birmingham	†1/10	†1/5½	Filey	1/8½	1/4	Middlesbrough	1/10	1/5½	Torquay	1/9½	1/4½
Bishop Auckland	1/10	1/5½	Fleetwood	1/10	1/5½	Middleton	1/10	1/5½	Totnes	1/8	1/3½
Bishops Stortford	1/9	1/4½	Flint	1/10	1/5½	Middlewich	1/9½	1/4½	Trowbridge	1/7	1/3
Blackburn	1/10	1/5½	Folkestone	1/8	1/3½	Milford Haven	1/8½	1/4	Truro	1/7½	1/3½
Blackpool	1/10	1/5½	Frinton-on-Sea	1/8	1/3½	Morecambe	1/10	1/5½	Tunbridge Wells	1/8½	1/4
Blyth	1/10	1/5½	Frome	1/7	1/3	Morley	1/10	1/5½	Uppingham	1/8½	1/4
Bognor Regis	1/8	1/3½	Gainsborough	1/9	1/4½	Mundesley	1/7	1/3	Uttoxeter	1/8½	1/4
Bolton	1/10	1/5½	Gateshead	1/10	1/5½	Nantwich	1/9½	1/4½	Wakefield	1/10	1/5½
Bournemouth	1/9	1/4½	Gillingham (Kent)	1/9	1/4½	Nelson	1/10	1/5½	Walsall	1/10	1/5½
Bracknell	1/8	1/3½	Glossop	1/10	1/5½	Newark-on-Trent	1/9½	1/4½	Walsden	1/10	1/5½
Bradford	1/10	1/5½	Gloucester	1/9½	1/4½	Newbury	1/8	1/3½	Walton-on-Naze	1/8	1/3½
Bradford-on-Avon	1/7	1/3	Godalming	1/8	1/3½	Newcastle-on-Tyne	1/10	1/5½	Ware	1/9½	1/4½
Braintree	1/8	1/3½	Goole	1/10	1/5½	Newcastle-u.-Lyme	1/10	1/5½	Warminster	1/7	1/3
Brentwood	1/9½	1/4½	Gosport	1/9½	1/4½	New Forest	1/8	1/3½	Warrington	1/10	1/5½
Bridgwater	1/8½	1/4	Grantham	1/9	1/4½	Newmarket	1/8	1/3½	Warwick	1/10	1/5½
Bridlington	1/9½	1/4½	Gravesend	1/9½	1/4½	Newport, Mon.	1/10	1/5½	Wellingborough	1/9½	1/4½
Brighouse	1/10	1/5½	Great Yarmouth	1/8	1/3½	Newport Pagnell	1/8	1/3½	Welwyn	1/9	1/4½
Brighton	1/9	1/4½	Grimsby	1/10	1/5½	Northampton	1/10	1/5½	Welwyn Gar. City	1/10	1/5½
Bristol	1/10	1/5½	Guildford	1/8	1/3½	Norwich	1/10	1/5½	Wells (Norfolk)	1/6½	1/2½
Broadstairs	1/8	1/3½	Guilsborough	1/8½	1/4	Nottingham	1/10	1/5½	West Bromwich	1/10	1/5½
Bromsgrove	1/9½	1/4½	Halifax	1/10	1/5½	Nuneaton	1/10	1/5½	Westcliff-on-Sea	1/9½	1/4½
Buckley	1/10	1/5½	Hanley	1/10	1/5½	Oakham	1/8½	1/4	Weston-super-Mare	1/9	1/4½
Bungay	1/6	1/2½	Harpenden	1/9	1/4½	Oldham	1/10	1/5½	Weybridge	1/9	1/4½
Burnham-on-Crouch	1/6½	1/2½	Harrogate	1/10	1/5½	Ormskirk	1/10	1/5½	Weymouth	1/8	1/3½
Burnley	1/10	1/5½	Hartlepools	1/10	1/5½	Oxford	1/9½	1/4½	Whitby	1/9	1/4½
Burslem	1/10	1/5½	Harwich	1/8	1/3½	Oxted	1/8½	1/4	Whitstable	1/8	1/3½
Burton-on-Trent	1/10	1/5½	Haslemere	1/8	1/3½	Paignton	1/9½	1/4½	Widnes	1/10	1/5½
Bury	1/10	1/5½	Hastings	1/8	1/3½	Peterborough	1/9½	1/4½	Wigan	1/10	1/5½
Bury St. Edmunds	1/7½	1/3½	Hatfield	1/9½	1/4½	Plymouth	1/10	1/5½	Wigton	1/8½	1/4
Buxton	1/9½	1/4½	Haywards Heath	1/8	1/3½	Pontefract	1/10	1/5½	Willington	1/10	1/5½
Byfleet	1/8½	1/4	Hednesford	1/9½	1/4½	Pontypridd	1/10	1/5½	Wilmslow	1/10	1/5½
Cambridge	1/10	1/5½	Hemel Hempstead	1/9	1/4½	Port Talbot	1/10	1/5½	Winchester	1/8½	1/4
Canterbury	1/8	1/3½	Henley-on-Thames	1/8	1/3½	Portsmouth	1/9½	1/4½	Windermere	1/8½	1/4
Cardiff	1/10	1/5½	Hereford	1/8	1/3½	Preston	1/10	1/5½	Windsor	1/9	1/4½
Carlisle	1/10	1/5½	Herne Bay	1/8	1/3½	Pulborough	1/8	1/3½	Wisbech	1/7½	1/3½
Carnforth	1/10	1/5½	Hertford	1/9½	1/4½	Ramsgate	1/8	1/3½	Witham	1/8	1/3½
Castleford	1/10	1/5½	Heysham	1/10	1/5½	Reading	1/9½	1/4½	Woking	1/8½	1/4
Caterham	1/10	1/5½	Hitchin	1/9	1/4½	Redditch	1/9½	1/4½	Wokingham	1/8	1/3½
Chard	1/7	1/3	Hoddesdon	1/9½	1/4½	Redhill	1/8½	1/4	Wolverhampton	1/10	1/5½
Chatham	1/9	1/4½	Holt (Norfolk)	1/6½	1/2½	Ripon	1/8½	1/4	Woodbridge	1/7½	1/3½
Chelmsford	1/9½	1/4½	Horley	1/8	1/3½	Rochdale	1/10	1/5½	Worcester	1/9½	1/4½
Cheltenham	1/9	1/4½	Horsham	1/8	1/3½	Rochester	1/9	1/4½	Workington	1/8½	1/4
Chepstow	1/9½	1/4½	Horwich	1/10	1/5½	Rugby	1/10	1/5½	Worksop	1/9½	1/4½
Chertsey	1/9	1/4½	Huddersfield	1/10	1/5½	St. Albans	1/9½	1/4½	Worthing	1/8	1/3½
Chesterfield	1/10	1/5½	Hull	1/10	1/5½	St. Helens	1/10	1/5½	Wrexham	1/9½	1/4½
Chichester	1/8	1/3½	Hunstanton	1/7	1/3	St. Neots	1/7½	1/3½	Wroxham	1/7½	1/3½
Chorley	1/10	1/5½	Huntingdon	1/7½	1/3½	Saffron Walden	1/7	1/3	Wycombe	1/9	1/4½
Cirencester	1/7½	1/3½	Ilfracombe	1/8	1/3½	Salisbury City	1/7½	1/3½	Wymondham	1/7	1/3
Clacton	1/8	1/3½	Ingatestone	1/8½	1/4	Salisbury Plain	1/9	1/4½	Yeovil	1/8½	1/4
Cleveleys	1/10	1/5½	Ipswich	1/9½	1/4½	Sawbridgeworth	1/8½	1/4	York	1/10	1/5½

* Painters 1d. less than other Craftsmen. † Plus 2d. per working day. ‡ Plasterers 2/0½

¶ Tradesman's Labourers, 1/6½. Navvies and General Labourers 1/5½.

§ Joiners, Plumbers, Bricklayers, Tilers and Masons receive 2/- per week or 4d. per day Tool Money.

Note: Carpenters and Joiners in all Towns and Districts (other than Birkenhead and Liverpool) receive 2d per day Tool Allowance

For Building Trade Wages in Scotland, see page 328.

PRICES CURRENT OF MATERIALS*

Note: Owing to the exceptional circumstances which prevail at the present time prices of materials should be confirmed by inquiry.
The prices of soft woods are for cash on delivery.
At present linseed oil and genuine spirits of turpentine can only be supplied in cans in small quantities.

BRICKS, &c.

The price for Stock Bricks has been altered to minimum price at works for full lorry loads. Sittingbourne district. A quotation for carriage should be obtained as the haulage question is difficult.

		£ s. d.
First Hard Stocks	per 1,000	£4 5 6
Second Hard Stocks	,,	3 18 6
Mild Stocks	,,	3 5 6
Single Rough Stocks	,,	2 19 6
Third Common Stocks	,,	2 10 0

2½ in. Phorpres. A discount of 6d. 1,000 only monthly account.	King's Cross Station per 1,000. s. d.	To sites in W.C. District per 1,000 s. d.
Pressed	51 9	58 3
Keyed	53 9	60 3
Single Bullnose	71 9	78 3
Rustics	71 9	78 3
Whites	72 3	78 3

	£ s. d.
White Midhurst Facing Bricks (delivered London site)	3 12 6
Best blue Pressed Staffs. (London Stns.)	10 2 0
Do. Bullnose (London Stns.)	10 12 0
Blue Wire Cuts (London Stns.)	8 19 6
Best Stourbridge Fire Brick (London Stns.):— 2½ in. 9 3 6 3 in.	11 1 0

Glazed Bricks. (London Stns.)

Best White Ivory and Salt Glazed	D'ble Str'tch'rs	36 10 0
	D'ble Headers	33 10 0
Stretcher 28 0 0	One sided two ends	37 10 0
Headers 27 10 0	Two sides & one end	38 10 0
Quoins, Bullnose and 4½ in. Flats 34 10 0	Splays and Squints	36 0 0

Second Quality, £2 per 1,000 less than best. Cream and buff, £2 extra over white. Other colours, Hard Glaze, £5 10s. extra over white.

PARTITION SLABS.

Delivered London Area.

"Phorpres" Hollow Partition Blocks.

2" per yd. sup.	2 3	3" per yd. sup.	2 9
2½" " "	2 6	4" " "	3 1

Clinker Concrete.

2" per yd. sup.	1 6	3" per yd. sup.	2 0
2½" " "	1 8	4" " "	2 4

Cranham Terra Cotta.

2" per yd. sup.	3 0	3" per yd. sup.	3 8
2½" " "	3 6	4" " "	4 7

Hempstead—Keyed Two Sides.

12" x 9" x 2"	2 6	12" x 9" x 3"	3 0
12" x 9" x 2½"	2 9	12" x 9" x 4"	3 9

Per yard super d/d. Free on site, London.

SAND.

Thames Ballast	8	6 per yd.
Pit Ballast	8	5 " "
Pit Sand	10	0 " "
Washed Sand	13	0 " "
¼ in. Shingle	8	0 " "
¼ in. Broken Brick	12	6 " "
Pan Breeze	8	3 " "

delivered 2 miles radius Paddington.

CEMENT.

Best British Portland Cement. Standard Specification. delivered London Area.

	£ s. d.
4 ton loads and upwards site. Per ton	2 9 6
1 ton to 4 tons site	2 12 6
Alongside Vauxhall in 80 ton lots	2 7 0
"Ferrocrete" Rapid Hardening Cement—	
4 ton loads and upwards site	2 15 6
1 ton to 4 tons site	2 18 6
Alongside Vauxhall in 80 ton lots	2 13 0

Stored in Reserved Bins at works. 1/6 per ton extra.

"Aquacrete" Water Repellent, "Blue Circle" cement, 30/- per ton extra on ordinary "Blue Circle" prices.

"Colorcrete" Nos. 1 and 2. Coloured Rapid Hardening Portland Cement	3 19 6
"Colorcrete" not rapid hardening, according to colour, from £7 to £15 10s. per ton.	
"Snowcrete" White Portland Cement	9 5 0
Super Cement (Waterproof), *bags extra*	3 19 6

Note.—Paper bags will be charged at the rate of 6/- nett per ton. Jute sacks charged 1s. 9d. nett each and 1/6 nett each allowed if returned to works within two weeks, in good condition.

Carriage will be paid by makers on returned empty jute sacks.

Roman Cement	£8 0	Keene's Cement, White	£7 0 0
Parian Cement	7 0	" " Pink	6 10 0

Cementone Colours for cement according to tints per cwt. from £2 16s. 0d.

PLASTER.

	£ s. d.		£ s. d.
Coarse, Pink	4 0 0	Sirapite, Coarse	4 5 6
" White	4 7 6	" Finish	4 13 6
Plaster	4 5 0		

Above prices for 4-ton loads and over London Area.

Best Ground Blue Lias Lime	3 0 6	Grey Stone Lime	2 14 6
		Chalk Lime	2 14 6
Granite Chippings	1 15 0	Hair per cwt.	2 7 6

Note.—Sacks are charged 1s. 9d. each, and credited 1s. 6d., if returned in good condition within three months, carriage paid.

Stourbridge Fireclay in paper bags, £2 12 6 in 6-ton lots at railway depot.

STONE.

Bath Stone.—Delivered in railway trucks at Westbourne Park, Paddington, G.W.R., or South Lambeth, G.W.R., per ft. cube — s. d. 2 3½

Beer Stone—Random Block—

Free on rail at Seaton Station per ft. cube	2 3
Delivered free on rail Nine Elms, S.R. "	3 1½

Selected approximate size one way, 1d. per cubic ft. extra, selected approximately three sizes or for special work, 3d. per cubic ft. extra.

Portland Stone—

	s. d.
Brown Whitbed, in random blocks of 20 ft. average, delivered in railway trucks at Nine Elms, S. Rly., South Lambeth Station, G.W.R., and Westbourne Park, Paddington, G.W.R., per ft. cube	4 7
Do. do. delivered on road waggons as above stations, per ft. cube	4 7
White basebed, 3d. per ft. cube extra.	

Note.—1d. per ft. cube extra for every ft. over 20 ft. *average* and ½d. beyond 20 ft.

Hopton-Wood Stone—

F.O.R. Quarries, Wirksworth, Derbyshire, Random blocks from 10 ft. and over F.ft.cb.	13 2
Sawn two sides	26 11
Sawn three or four sides	31 11

York Stone, Blue—*Robin Hood Quality*, Delivered at any Goods Station, London.

6 in. sawn two sides landings to sizes (under 80 ft. super) per ft. super	5 6
6 in. rubbed two sides, ditto "	6 3
3 in. sawn two sides slabs (random sizes) "	2 7
2 in. to 2½ in. sawn one side slabs (random sizes) (paving) "	1 8½
1½ in. to 2 in. ditto "	1 4½

Hard York—

Delivered at any Goods Station, London. Scrappled random blocks per ft. cube	6 10
6 in. sawn two sides landings to sizes (under 40 ft. super) per ft. super	5 7½
6 in. rubbed two sides, ditto "	6 9
4 in. sawn two sides slabs (random sizes) "	3 5
3 in. ditto ditto "	2 8
2 in. self-faced random flags per yd. super	8 9

CAST STONE.

Delivered in London area in full van loads, per ft. cube: Plain, 7s. 6d. Moulded, 8s. 6d. Sills, 10s. 0d.

HARD WOOD.

1 INCH AND UP THICK.

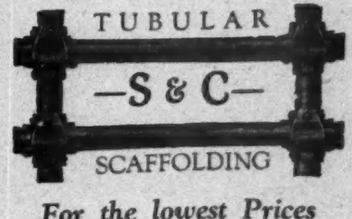
	£ s. d.
Average price for prime quality.	
Dry Austrian Wainscot, per ft. cube	0 17 0
Dry American and/or Japanese Figured Oak, per ft. cube 10 6 to	0 13 0
Dry American and/or Japanese plain Oak, per ft. cube	0 11 6
Dry sq. edged Honduras Mahogany, per ft. cube	0 15 0
Dry log-cut Honduras Mahogany, per ft. cube 12 6 to	0 16 0
Dry Cuba Mahogany, per ft. cube	0 18 0
Dry Teak, per ft. cube	0 14 0
Dry American Whitewood, per ft. cube	0 10 6
Dry Australian Walnut, per ft. cube	0 19 0
Dry Queensland Silky Oak, per ft. cube	0 12 6
Dry African Mahogany, per ft. cube	0 10 0
Dry African Whitewood, per ft. cube	0 8 0
Dry English Wainscot Oak, per ft. cube	0 16 0
Best Scotch Glue, per cwt.	3 0 0
Liquid Glue, per cwt. 4 7 0 to	5 10 0

SOFT WOOD.

Merchantable British Columbian Pine.

	Minimum. £ s. d.	Maximum. £ s. d.
Scantlings in imported sizes, 2 in. by 3 in. to 4 in. by 11 in.	43 10 0	53 0 0

Having Secured the Contract— What about the Steel Scaffolding?



For the lowest Prices apply to the Oldest Firm in the Scaffolding Trade.

STEPHENS & CARTER LTD.
The British Steel Scaffolding Co.
731-761, HARROW RD., N.W.10.
Telephone No. Ladbroke 1191 (6 lines).

PLANED BOARDS.

Prime Clear British Columbian Pine.

	Per standard. £ s. d.
1 in. by 11 in. } 1 in. by 9 in. }	67 10 0

	Per square. s. d.
1 in. plain edge flooring	53 0
1¼ in. ditto	66 6
1 in. tongued and grooved	53 0
1¼ in. ditto	66 6

MATCHING.

	Per square. s. d.
⅝ in.	37 6
¾ in.	42 0
1 in.	55 0

SLATES.

First quality slates from Penrhyn or Portmadoc, carriage paid in full truck loads to London Rate Station. Per 1,000 actual.

	£ s. d.		£ s. d.
24 by 12	39 7 6	18 by 10	21 15 0
22 by 12	33 0 0	18 by 9	20 0 0
22 by 11	30 5 0	16 by 10	19 0 0
20 by 12	29 10 0	16 by 8	15 5 0
20 by 10	27 2 6		

TILES.

Delivered at London rate stations in full truck loads of not less than 6 tons. Per 1,000 f.o.r. London

	£ s. d.
Best machine-made tiles from Broseley or Staffordshire district	£5 10 0
Ditto hand-made ditto	6 10 0
Ornamental ditto	6 15 0
Hip and valley tiles (per dozen) Hand-made	0 11 6
Machine-made	0 11 0

METALS.

Joists, Girders, &c., to London Station per ton—

R.S. Joists, cut and fitted	£22 10 0
Plain Compound Girders	25 0 0
Stanchions	27 10 0
In Roof Work	32 10 0

Note.—These prices are for standard pieces and not special pieces of an awkward nature.

Mild Steel Rounds.—To London Stations, per ton.

Diameter.	£ s. d.	Diameter.	£ s. d.
¼ in.	22 5 0	⅜ in. to ½ in.	20 15 0
⅝ in.	21 5 0	¾ in. to 2¼ in.	20 5 0

Wrought Tubes and Fittings.

Deliveries from works.

Deliveries from London stock further 2½% gross.

Fittings.

	Tubes. 10/17 ½"/6" %	Tubulars. and ½"/6" %	10/24 %	Flanges. ½"/2" %	2½"/8" %
Light weight	55½	—	48	51½	55
Heavy weight	48½	48½	40½	41½	50½
Galv. lightweight	44½	—	39½	40½	49½
Galv. heavyweight	35½	35½	31½	30½	41½

Tubes and tubulars sizes ½"/1" inclusive, charged extra of 5% less gross.

Fittings. Figs. 25/34 5% less gross discount.

Terms.—Nett cash end of month following date of invoice. Carriage paid on lots of £10 nett value and over.

C.I. Half-Round Gutters—London Prices ex Works. per yd. in 6 ft. lengths.

	Gutters.	Nozzles.	Stop ends.
3 in.	1/4½	1/1	4d.
3½ in.	1/5½	1/2½	4d.
4 in.	1/5½	1/4½	6½d.
4½ in.	1/6½	1/8	7½d.
5 in.	1/10½	1/11½	8d.

O.G. Gutters.

3 in.	1/9	1/3½	4½d.
3½ in.	1/11½	1/5½	6d.
4 in.	1/11½	1/6½	7d.
4½ in.	2/0½	1/8½	8d.
5 in.	2/6	2/0½	9½d.

Rain Water Pipes.

Per yd. in 6 ft.	Pipe.	Bends. Stock angles.	Branches.
2 in.	2/0½	1/4½	2/0
2½ in.	2/1½	1/6½	2/4½
3 in.	2/7½	1/11½	2/10½
3½ in.	3/1	2/3½	3/4½
4 in.	3/6½	2/9½	4/0½

Nett Prices.

Tonnage allowance—4-ton lots, 5 per cent. 2-ton lots, 2½ per cent.

L.C.C. Coated Soil Pipes.—London Prices, ex Stock.

Per yd. in 6 ft.	Pipe.	Bends.	Branches.
2 in.	3/4½	2/4½	2/10½
2½ in.	4/0½	2/7½	3/7½
3 in.	4/4½	2/10½	4/3½
3½ in.	4/5½	3/7½	5/0½
4 in.	4/10	4/0½	5/9½

L.C.C. Coated Drain Pipes.

	Pipe.	Bends.	Branches.
3 in. per yd. in 9 ft.	5/5	6/3	9/11
cwt. qr. lbs.			
4 in. 1 1 20	7/11	7/1	12/6
5 in. 1 2 22	9/7	12/0	19/3
6 in. 2 0 0	11/5	14/8	25/6

Gaskin, 75/- per cwt.

* The information given on this page has been specially compiled for The Builder, and is copyright. The aim in this list is to give, as far as possible, the *average* prices of materials, not necessarily the highest or lowest. Quality and quantity obviously affect prices—a fact which should be remembered by those who make use of this information. Prices are subject to 2½ per cent. cash discount.

PRICES CURRENT OF MATERIALS—(contd.)

	Per ton basis in London. £ s. d.		£ s. d.
IRON.—Staffordshire Crown, Merchant quality	17 2 6	to	18 7 6
IRON.—Staffordshire Marked Bars	20 0 0	to	22 0 0
Mild Steel Bars	19 12 0	to	21 2 0
Mild Steel Hoops	21 6 0	to	21 16 0
	Ex Merchant's Stock, per ton (two-ton lots).		
Soft Steel Sheets, C.R. and C.A.—			
20 gauge	24 17 6	to	27 5 0
24 gauge	25 2 6	to	27 0 0
26 gauge	25 17 6	to	27 15 0
Galvanized Corrugated Sheets, 6 ft. to 9 ft.—			
20 gauge	27 1 3	to	28 6 3
24 gauge	27 11 3	to	28 16 3
26 gauge	28 16 3	to	30 11 3
Galvanized Flat Sheets, C.R. and C.A.—			
20 gauge	28 11 3	to	30 6 9
24 gauge	29 1 3	to	30 18 9
26 gauge	30 6 3	to	32 3 9
	Per ton. £ s. d.		£ s. d.
Cut Nails, 2 in. and up	26 0 0	to	27 10 0

ALL NETT.

METAL WINDOWS.—Standard sizes, suitable for complete houses, including all fittings, painting two coats, and delivery to job, average price about 1s. 4d. to 1s. 7d. per foot super.

COPPER.

Seamless copper tubes (basis)	per lb.	1/3
Strong sheet	"	1/6
Thin sheet	"	1/7
Copper nails	"	1/6
" wire	"	1/6

PLUMBERS' BRASS WORK.

Delivered in London.
Stamped by Met. Water Board.

CRUTCH HEAD S.D. BIB COCKS FOR IRON. EASY CLEAN.

½ in.	¾ in.
34/-	53/- per doz.

CHROMIUM PLATED TOILET S.D. BIB COCKS FOR IRON. EASY CLEAN.

½ in.	¾ in.
50/-	68/- per doz.

S.D. STOP COCKS FOR IRON.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
37/6	53/-	87/-	202/-	288/-	460/- per doz.

S.D.S. COCKS WITH TWO UNIONS FOR LEAD.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
47/-	76/6	120/-	226/-	360/-	588/- per doz.

DOUBLE NUT BOILER SCREWS.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
8/10	9/9	15/9	27/3	44/-	63/6 per doz.

HEAVY CROYDON BALL VALVES. SCREW IRON.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.
45/-	72/-	120/-	204/-	260/- per doz.

CAPS AND SCREWS.

1½ in.	1¾ in.	2 in.	3 in.	3½ in.	4 in.
10/6	12/9	19/3	34/-	48/-	53/- per doz.

BRASS SLEEVES.

1½ in.	2 in.	3 in.	3½ in.	4 in.
9/9	12/6	22/6	38/-	42/- per doz.

DRAWN LEAD TRAPS WITH BRASS CLEANING SCREWS.

	1½ in.	1½ in.	2 in.	3 in.
8 lb. Lead P...	29/-	38/-	54/-	93/- per doz.
8 lb. Lead S...	36/-	42/-	67/-	120/- "

SOLDER.—Plumbers, 1/5. Tinmen's, 1/8. Flow pipe, 1/10 per lb.

PAINTS, &c.

		£ s. d.
Raw Linseed Oil, in drums	per gallon	0 5 4
Boiled Linseed Oil, in drums	"	0 5 7
Turpentine, in drums (10 gals.)	"	0 5 3
Genuine Ground English White Lead, per ton (In not less than 5-cwt. casks). Extra for 1-cwt. kegs over 5-cwt. casks is 2/9 cwt.		61 0 0
GENUINE WHITE LEAD PAINT— "Father Thames," "Nine Elms," "Park," "Supremus," "St. Paul's," "Morganwyte," "Polasco," "J" Brand, and other best brands (in 14-lb. tins) not less than 5-cwt. lots, per ton delivered		£ s. d. 83 10 0
Red Lead, Dry (packages extra)	per ton	52 0 0
Best Linseed Oil Putty (1 ton lots)	per cwt.	0 17 1½
Size, XD quality	1 kn.	0 3 6

Turpentine substitute can be obtained and prices vary according to the quality from 2/9 gallon upwards.

		£ s. d.
SNOWCEM CEMENT PAINT	per cwt.	2 16 0
C.M.C. CAMOUFLAGE PAINT	"	2 16 0

VARNISHES, &c.

		Per gallon.
Oak Varnish	Outside	0 14 0
Fine do.	"	0 16 0
Fine Copal	"	0 18 0
Pale Copal	"	1 0 0
Pale Opal Carriage	"	1 4 0
Best do. do.	"	1 12 0
Floor Varnish	Inside	0 18 0
Fine Pale Paper	"	0 18 0
Fine Copal Cabinet	"	1 2 0
Fine Copal Flatting	"	1 0 0
Hard Drying Oak	"	0 18 0
Fine Hard Drying Oak	"	0 19 6
Fine Copal Varnish	"	1 0 6
Pale do.	"	1 12 0
Best do.	"	1 2 6
Best Japan Gold Size	"	1 12 6
Best Black Japan	"	0 10 0
Oak and Mahogany Stain (water)	"	0 12 0
Brunswick Black	"	0 7 6
Berlin Black	"	0 14 0
Knotting (patent)	"	0 15 0
French and Brush Polish	"	0 12 0
Liquid Dryers in Turpentine	"	0 9 0
Oxiram Black Enamel	"	0 7 0

GLASS.

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES.

ORDINARY GLAZING QUALITY (O.Q.) AND SELECTED GLAZING QUALITY (S.Q.).

PER FOOT SUPER.

In sizes not exceeding 80 in. long or 48 in. wide or 110 united inches.

	O.Q.	S.Q.
18 oz. in 300 ft. cases	2½d.	2¾d.
24 oz. " 200 ft. "	3½d.	4d.
26 oz. " 200 ft. "	3¾d.	4¼d.
32 oz. " 200 ft. "	5¼d.	6¼d.
24 oz. " 300 ft. "	3¼d.	3¾d.
26 oz. " 300 ft. "	3¾d.	4¼d.
32 oz. " 300 ft. "	5¼d.	6¼d.
18 oz. Obscured Sheet		5¼d.
24 oz. Obscured Sheet		6¼d.
Fluted, 21 oz.		9d.
Enamelled, 18 oz.		5½d.
" 24 oz.		6½d.

Extra price according to size and substance for squares cut from stock.

ENGLISH ROLLED PLATE AND FIGURED CATHEDRAL, ETC., IN CUT SIZES.

	Per ft.
Rolled plate, ¼ in.	5½d.
Rough cast double rolled, ⅛ in.	6½d.
Rough cast double rolled, ¼ in.	6½d.
Figured rolled, and Cathedral, white	6½d.
Figured rolled and Cathedral, tinted	9½d.
Rolled Sheet	6d.
Reeded, Broad Reeded, Cross Reeded and Chevron Reeded, ¼ in. thick	0 10½

Rolled plate is the same price as rough cast double rolled.

	Per ft. a. d.
Wire Rolled, ¼ in. thick	0 9½
Wired Cast, ¼ in. thick	0 9½
Georgian Wired Cast	0 10
"Calorex" Sheet, 21 oz.	2 6
" 32 oz.	4 0
" Cast, ¼ in. thick	0 10
" " ⅜ in. thick	1 0
" " ½ in. thick	1 2
Non Actinic Glass, ¼ in. thick	0 9½
" " ⅜ in. thick	1 0
" " ½ in. thick	1 2

"VITA" GLASS.

	Per ft. s. d.
"Vita" Plate Glass, about ¼ thick	
To 7 ft. super	5 0
Over 7 ft. super	7 6
"Vita" Sheet Glass, about 18/20 oz.	2 0
Cathedral "Vita" Glass:	
¼ in. thickness	2 0
⅜ in. "	3 0
½ in. Georgian Wired "Vita" Glass	3 6

LEAD, &c.

(Delivered in London.)	Per ton. £ s. d.
LEAD.—Sheet, English, 4 lb. and up	34 10 0
Pipe in coils	34 0 0
Soil pipe	39 10 0
Compo pipe	41 5 0

NOTE.—Country delivery, 20/- per ton extra, lots under 3 cwt. 4/- per cwt. extra and over 3 cwt. and under 5 cwt., 2/6 per cwt. extra. Cut to sizes, 4/- per cwt. extra.

Old lead, ex London area, at Mills. per ton £18 0 0.

BUILDING TRADE WAGES IN SCOTLAND

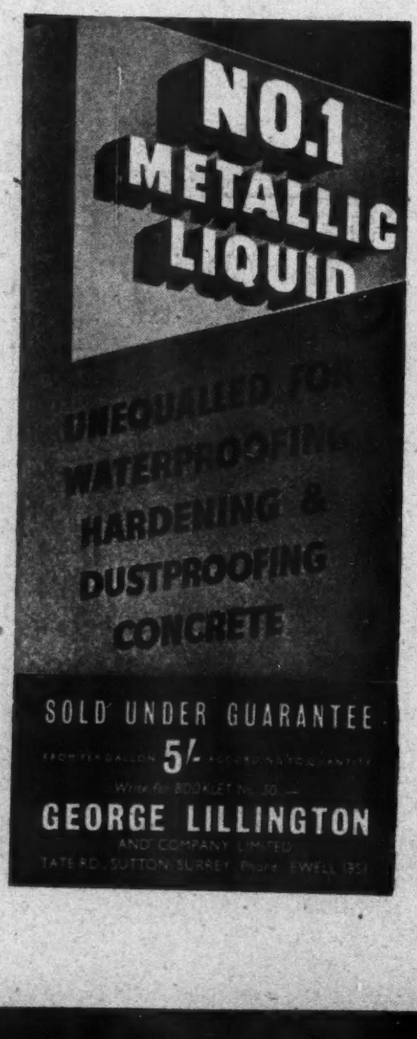
Following are grade rates authorised by the Scottish N.J.C. from February 1. Every endeavour is made to ensure accuracy, but we cannot be responsible for errors that may occur.

Grade Classification	A	A^1	A^2	A^3	B	B^1
Craftsmen	1/10½	1/10	1/9½	1/9	1/8½	1/8
Labourers	1/5	1/4½	1/4½	1/4	1/3½	1/3½

Aberdeen	A	Dumfriesshire	A^2	Inverness	*	Perthshire	A^2
Ayrshire	A	Dundee	A	Inverurie	A^1	Peterhead	A^1
Banff	B	Dunoon	A	Kincardineshire	A^2	Renfrewshire	A
Berwickshire	A^2	East Fife	A	Kinross-shire	A	Rothesay	A
Bridge of Allan	A	East Lothian	A	Lanarkshire	A	Roxburghshire	A^2
Broughty Ferry	A	Edinburgh	A	Midlothian	A	St. Andrews	A
Clackmannanshire	A	Fifeshire	A	Monifieth	A	Selkirkshire	A^2
Doune	A	Forfarshire	A^2	Moray and Nairn	B	Stewartry	A^2
Dunblane	A	Glasgow	A	Newport	A	Stirlingshire	A
Dumbartonshire	A	Greenock	A	Peeblesshire	A^2	Stornoway	A
Dumfries	A^1	Hamilton	A	Perth	A	Tayport	A^2
						West Lothian	A

* This town has its own rates: Masons, 1/8½; Carpenters, 1/8½; Slaters, 1/8½; Plumbers, 1/9; Plasterers, 1/9½; but 1/10 is paid owing to the scarcity at present; Painters, 1/8½ and Labourers, 1/4.

The information given in this table is copyright. Rates of wages in England and Wales are given on page 326.



THE SCOTTISH BUILDER

BISHOPBRIGGS. — BUILDINGS.—Mr. W. Watts, F.R.I.B.A., Lanarkshire Acting Architect, Albert-st., Motherwell-Wishaw, has prepared plans for new police buildings.

GLASGOW. — BUILDING.—Plans in hand for additions to Glasgow Institution for Orphan Children. Mr. J. McNab, 129, Bath-st., architect.—Kelvin Construction Co., Ltd., Lochburn-rd., Possilpark, have prepared plans for new buildings.—Plans prepared for the Scottish Wholesale Co-operative Society, Ltd., by Mr. C. Armour, architect, 95, Morrison-st., for new building.—Plans prepared for additions to Parkhead Garage, the architect being Mr. A. Findlay, 46, Bath-st.—Plans prepared by Messrs. Cowieson, Ltd., Charles-st., for additions for Messrs. Sunderland.

GREENOCK.—FEEDING CENTRE.—The Corporation has plans in hand for a communal feeding centre, at £6,731. Mr. Robert Miller, architect, Municipal Buildings.

STIRLINGSHIRE. — FIRE STATION.—The C.C. is to expend about £500 on the fire station at Slammanon, the architect being Mr. A. Malcolm, County Offices, Stirling.

NEW BUILDINGS IN LONDON

HACKNEY.—BUILDING.—The B.C. recommend alterations to the meter-room, at £1,500, and additional office accommodation at a generating station, at £500.

LEWISHAM.—ADDITIONS.—The B.C. has approved additions to premises in Lewisham High-st. by Messrs. Bovis, Ltd., 1, Stanhope-gate, W.1.

LEWISHAM. — ADAPTATION. — The B.C. have been informed that the London Hostels Association, Ltd., have taken premises at Granville Park, and are adapting them for use as a hostel for men and boys.

TWICKENHAM. — BUILDING.—The T.C. received applications for the following: Hall at factory at Hampton, for Messrs. Gaya (Hampton), Ltd.

TENDERS

The Editor welcomes authentic information for this feature from architects, surveyors or contractors. Items should reach 4, Catherine-street, Aldwych, W.C.2, not later than Tuesday morning.

Tenders for A.R.P. work will be found under "A.R.P. Schemes."

* Denotes *accepted*.
† Denotes *provisionally accepted*.
‡ Denotes *recommended for acceptance*.
§ Denotes *accepted subject to modification*.
¶ Denotes *accepted by H.M. Government departments*.

Birmingham. — Works, for E.C.: Work, Central College of Arts and Crafts, *C. Green & Sons, Ltd., 132, Monument-rd., Birmingham, £1,269; shelter at three clinics, *Thomas Lowe & Sons, Ltd., St. Agatha's-rd., Birmingham, £342, £324 and £340; work, R.C. school, *W. Bishop, Bristol-rd. South, Northfield, Birmingham, £320; work, Camp School, *A. H. Guest, Ltd., Stourbridge, £210.

Clitheroe. — Alterations and extensions to kitchen at school, for E.C. F. Margerison, Assoc.M.Inst.C.E., Boro' Eng. Quantities by Boro' Eng.:—

Edmondson Bros., Clitheroe	£312 0
*J. Bleazard & Sons, Railway-view, Clitheroe	271 2

Coventry.—Drainage work for new guild house, for T.C.: *Constable Hart & Co., Ltd., London, S.W.1, £1,000.

Dundee.—Works, for Corporation: Excavation, brick and building, *Laird Bros., Forfar, £1,015; construction and reinforced concrete piled foundations, *Dundee Contracting Co., Ltd., Dundee, £1,512; concrete roofing, *C. Dick & Son, £713; joinery, carpentry and ironmongery, *A. Oastler, Dundee, £198; tiling, *J. Archer, Dundee, £146.

Gateshead. — Extensions to loading dock, for Co-op. Society: *C.W.S. Building Dept., West Blandford-st., Newcastle-on-Tyne.

Glasgow.—Works, for Corporation. T. Somers, architect, Municipal Buildings: Painter work at refuse power works, *Cosmos Decorators, Ltd., Glasgow, £162 11s.; alterations at police station, *J. Allison, Ltd., Glasgow, £255 15s.; painting works at police offices: Maryhill—*Cosmos Decorators, Ltd., Glasgow; Govan—*W. Rae (Decorators), Ltd., Glasgow; Northern—*J. Stirling, Springburn; recruits' training centre—*McCulloch & Co., Glasgow; Southern—*Cosmos Decorators, Ltd., Glasgow; Plantation Office—*W. Rae (Decorators), Ltd., Glasgow; fittings, etc., for the Transport Dept., including heating work at garage, *A. Lowe & Co., Ltd., Glasgow; for protection works at power station, *W. Kiddie & Co.

Glasgow.—Works, for the Clyde Navigation Trust. A. G. Gardner, engineer and architect, Navigation Offices: Mastic asphalt work, *Scottish Speedwell Co., Ltd., Glasgow, £4,189.

Hebburn-on-Tyne. — Alterations to premises, for Reyrolle & Co., Ltd. Cackett, Burns Dick & McKellar, architects, 21, Ellison-pl., Newcastle-on-Tyne: *A. Anderson, Ltd., Stanmore-rd., Newcastle-on-Tyne.

Hendon.—Works at new council school, for E.C.:—Electric lighting, *F. R. Garrod, £510 15s. 9d.; flooring, *Windsor Floors, Ltd.; asphalting, *Natural Rock Asphalte, £427 6s. 2d.; roofing tiling, *H. J. Greenham, Ltd., £701 9s. 10d.

Huntingdon. — Pair of houses in each of parishes of Abbots Ripton and Alconbury Weston, for R.D.C. Wm. A. Lea, F.R.I.B.A., 4, Market Hill: *M. J. Allen & Sons, Ltd., Brampton, Huntingdon, £1,600 per pair.

¶London (Air Ministry).—Contracts placed to value of £500 or over for the week ended March 15:—

General maintenance work: A. J. Darneley & Son, Ltd., Hull; A. & B. Hanson, Ltd., Southall, and G. E. Wallis & Sons, Ltd., London.

Civil engineering work: Landing Grounds Corpn. (G.B.), Ltd., Isleworth.

Air filtration work: G. N. Haden & Sons, Ltd., London; Fretwell Heating Co., Ltd., Leatherhead, and J. Jeffreys, Ltd., London.

¶London (War Dept.).—Works contracts placed for week ended March 15:—

Northumberland, miscellaneous work, J. and W. Lowry, 50, Corporation-st., Newcastle; Thos. Clements and Sons, Selbourne-gdns., Jesmond, Newcastle; Middlemiss Bros., Ltd., Coquet-st., Stepney Bank, Newcastle-on-Tyne, 1; The Northumberland Whinstone Co., Ltd., Millburn House, Newcastle.

Yorkshire, miscellaneous work, Wright and Kellett, Ltd., Finchdale-terr., Chester-le-St., Co. Durham.

Co. Durham, building work, R. C. Williamson, Hunstanton, Strathmore-rd., Rowlands Gill, Co. Durham.

Yorkshire, hutting (erection) and temporary camp (2 contracts), W. A. King and Son, Ltd., Westbourne-gr., North Ormesby, Middlesbrough.

Devon, hutting (erection), W. Brealy, 163, Cowick-st., Exeter.

Wiltshire, building work (hutting erection), Austins of East Ham, Ltd., Turl-st., Oxford; and F. Rendell and Son, Ltd., St. John-st., Devizes.

Devon, hutting (erection), W. F. Rees, Ltd., 20, Lockyer-st., Plymouth.

Devon, constructional work, F. J. Stanbury, Alexandra-works, Alexandra-rd., Mutley, Plymouth.

Essex, building work, W. H. C. Heath and Son, 22, Hainault-st., Ilford.

East Lothian, hutting (erection), J. Cullen (Contractors), Ltd., 8, Edinburgh-rd., Musselburgh.

Peebleshire, building work, R. Coll and Son, Ltd., Queen-st., Edinburgh.

Midlothian, hutting (erection), Wm. Dickson and Co., Ltd., 56, Millhill, Musselburgh.

Lancashire, hutting (erection) (2 contracts), Holmes (Preston), Ltd., Atherton-rd., Fulwood, Preston.

Lancashire, hutting (erection), Drake Bros. (Haslingden), Ltd., Holden Mill House, Haslingden; J. Turner and Sons (Preston), Ltd., William Henry-st., Preston; and J. Tinline, Ltd., Parker-st. Saw Mills, Bury.

Yorkshire, hutting (erection), F. P. Leach and Sons, Ltd., 1, Waterside-rd., Girlington, Yorks.

Cumberland, miscellaneous work, Bituminous Road Products, Ltd., Borough-rd. East, Middlesbrough.

Shropshire, hutting (erection), Wm. Higley and Son, 8, Pride Hill-chams., Shrewsbury.

Warwickshire, building work, Lewis and Watters, Cubbington-rd., Lillington, Leamington Spa.

Warwickshire, hutting (erection), J. K. Mansell (Contractors), Ltd., Blondvil-st., Coventry.

Surrey and Hampshire, hutting (erection), H. W. Fisk, Ltd., 2, Wharf-st., Godalming.

DON'T TENDER UNSUCCESSFULLY

SECURE CONTRACTS WITH

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Co. Armagh, miscellaneous work, P. McKenna and Sons, City Mills, Armagh; and White and Co., Dunowen Gdns., Belfast.

Co. Down, miscellaneous work, R. J. Campbell (London), Ltd., 33, Scottish Provident-bldgs., Belfast.

Berkshire, constructional work, R. G. Francis and Co., Ltd., Somerset House, High-st., Ascot.

Hampshire, miscellaneous work, H. J. Reed, West st., Farnham; and A. P. Bowley and Sons, Liss.

Essex, miscellaneous works, S. Cronin and Son, Britannia-rd., Warley, Essex.

Glamorganshire, miscellaneous works, Rogers and Davies, Ltd., Lockwith-pl., Cardiff.

Northumberland, miscellaneous work, H. E. Pott, Ltd., Leopold-st., Sunderland.

Yorkshire, building work and hutting (erection), Samuel Johnson (Mirfield), Ltd., Newgate, Mirfield.

Northumberland, temporary camp, R. C. Williamson, Hunstanton, Strathmore-rd., Rowlands Gill.

Yorkshire, hutting (erection), Dunhill Bros., 387, York-rd., Leeds, 9.

Yorkshire, miscellaneous work (2 contracts), C. Gant and Son, New Burlington-rd., Bridlington.

Nottinghamshire, miscellaneous work, G. A. Pillat and Son, Ltd., Quorn-rd., Haydn-rd., Nottingham.

Leicestershire, miscellaneous work, Briggs and Co., Beechdale-rd., Western Boulevard, Nottingham.

Wiltshire, building work, Austins of East Ham, Ltd., Turl-st., Oxford.

Hertfordshire, miscellaneous work, Fassnidge, Son and Norris, Ltd., 267, High-st., Uxbridge.

Lancashire, hutting (erection), A. Ingham and Son, Crescent Saw Mills, St. Annes-on-Sea; and Drake Bros. (Haslingden), Ltd., Holden Mill House, Haslingden.

Cumberland, hutting (erection), Thos. Armstrong, Ltd., South-st., Cockermouth.

Aberdeenshire, building work, Alex. Hall and Sons (Builders), Ltd., 15, Mid Socket-rd., Aberdeen.

Shropshire, building work, J. Bromley, 74, Watling-street, Church Stretton.

Kent, miscellaneous works, T. W. Driver, Ltd., 32, Crantock-rd., Catford, S.E.6.

Co. Down, hutting, Collen Bros., Ltd., Hanover-st., Portadown, Co. Armagh.

Co. Armagh, hutting, Collen Bros., Ltd., Hanover-st., Portadown, Co. Armagh.

Co. Antrim, building work, Thos. McKee and Sons, Ltd., Imperial-dr., Belfast.

Co. Derry, hutting, R. Colhoun, Ltd., Society-st., Coleraine, Co. Derry.

Co. Down, building work, Sloan Bros., 1a, Deramore-av., Belfast.

Longford.—Repairs to ward, for Longford Board of Health and Public Assistance. R. B. Higgins: *P. Hearne, Dublin-st., Longford, £63 10s.

Matlock.—Concrete floor to reservoir, for U.D.C. J. Turner, Sur. Quantities by Sur.: *J. W. Wildgoose & Sons, Industrial Works, Matlock, £1,145.

Newcastle-upon-Tyne. — Feeding centres: *J. & W. Lowry, Corporation-st., Newcastle.

Newcastle-upon-Tyne.—Cleansing station at Tower View: *H. Waller, Back Waller-st., Byker, Newcastle.

Nottingham.—Roadway, for Rolls Royce, Ltd., Derby: *Constable, Hart & Co., Ltd., London, S.W.1 approximately £2,500.

St. Albans.—Fire station, for R.D.C. C. H. Huskinson, Eng. and Sur., 43, Upper Lattimore-rd.:—

Walter Strong, Ltd., Bishopsgate ...	£3,059
Tacchi & Burgess, St. Albans	2,866
J. Dennis, St. Albans	2,777
S. A. Field & Co., Ltd., Denham ...	2,657
Y. J. Lovell & Son, Ltd., Gerrards Cross	2,387
Whyatt, Ltd., Balham	2,373
S. Leighton, Ltd., Hendon	2,315
King & Son, St. Albans	2,023
E. & L. Berg, Ltd., Egham	1,998
R. F. Ewer, St. Albans	1,790
†Axtell & Harborough, Ltd., Redbourn	1,782

St. Ives (Hunts).—Work at slaughterhouse, North-rd., for T.C. G. G. Yeandle, Boro' Sur.: *W. Canham & Son, High-st., Somersham, £283.

South Shields.—Office accommodation, for Tyne Improvement Commission. L. J. Couves & Partners, architects, 2, Westfield-av., Gosforth: *J. R. Rutherford & Son, Ltd., Jesmond, Newcastle-on-Tyne.

Stafford.—68 non-parlour type houses, for T.C.: ‡Sabin & Young, Ltd., Rushall, £42,261.

Stratford-upon-Avon. — Fire station, for T.C. F. W. Jones, A.M.I.C.E., Boro' Sur.: *T. A. Simpkins, 66, High-st., Pershore, £6,800.

Wallasey.—Extensions to fire station, for T.C. L. St. G. Wilkinson, M.Sc., A.M.I.C.E., Boro' Sur.: *J. Tomkinson & Co., Ltd., 22, Roscommon-st., Liverpool, 5, £7,499.

CURRENT AND PROPOSED BUILDING WORK*

Ashton-under-Lyne.—Directors of "Star" Cinema, Church-st., propose structural alterations and improvements to cinema. Plans by J. Gibson, Market-av.

Coleshill.—Licensing Justices approved plans for hotel, junction of the Old Chester-rd. and Cook's-la., Baker's End for Ansells Brewery, Ltd., Aston Cross, Birmingham 5. Plans by Architects' Dept., Phillip-st., Aston, Birmingham 5.

Darlington.—T.C. approved: Bussey and Armstrong, extension to works, canteen and garage; Palmers Hebburn Co., Ltd., machine shop.

Erith.—T.C. approved: boiler house, etc., Vickers, Armstrong, Ltd.; shop premises, A. Woods.

Gateshead. — T.C. to approach M.H. to secure sanction to complete hospital. F. H. Patterson, Boro' Eng.

* See also List of Contracts Open.

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Gravesend. — T.C. placed contracts with local builders for permanent repairs to properties. Plans by Boro' Architect.

Hemsworth.—R.D.C. propose feeding and kitchen centres at Grimethorpe and South Elmsall. Plans by S. Price, Sur.

Hendon.—T.C. to repairs and redecorations five health centres, by Boro. Sur.

Heywood. — T.C. propose central feeding centre for school children, at £1,649. Plans by A. Middleton, Boro' Sur.

Huddersfield. — E.C. propose feeding centres.

Hyde.—T.C. approved: Works extensions, Simister and Chorlton.

Keighley.—T.C. propose distribution centres for community feeding at Utley Congregational Chapel and at old infants' school, Lees, at £2,000. Plans by E. J. Felgate (A.), Borough Architect, College-st.—E.C. propose adaptation of "Woodbine," Skipton-rd., for day nursery for 40 children.—T.C. approved: Flats, Greenhead-dr., M. S. Laycock.

Kidderminster. — T.C. propose drainage scheme at Stourport-rd. to pumping station and Chester-rd. and Hoobrook, at £7,700.—T.C. propose communal feeding and kitchen centre in premises at Prospect-la.—Watch Committee propose extensions to fire station.

Leigh.—T.C. propose garage and workshop for cleansing dept., at £6,000. Plans by T. A. Clare, Boro' Sur.

Manchester.—T.C. approved: additions to boiler house to the Good Shepherd Convent for the Society; plant house to works, Thomas French and Son, Ltd., Chester-rd., Cornbrook, H. S. Fairhurst and Son (F./A.), architects 55, Brown-st; house to works, Clayton Aniline Co., Ltd., Clayton, to own plans; canteen to works, D. Moseley and Sons, Ltd., Ardwick, to own plans.—Boddington's Breweries, Ltd., Strangeways Brewery, Bridge-st., Strangeways, propose rebuilding "Alliance" inn, Rochdale-rd. and Kay-st., Blackley.

Middleton.—T.C. propose adaptation of portion of assembly hall for community feeding centre. Plans by J. Pollard (L.), Boro. Architect.—Licensing Justices approved: structural alterations to "Hare and Hounds" hotel, Rochdale-rd. for J. W. Lees and Co., Ltd., The Brewery, Middleton Junction.

Newcastle-on-Tyne.—S. H. Lawson, Emercon-cham., Blackett-st., prepared plans for alterations to "Anchor" inn, The Close and the "Three Bulls" inn, Percy-st., for Robinson and Anderson, Ltd., 31, Groat Market.—Hill and Honeyman, 6, Eldon-sq., Newcastle, prepared plans for alterations to "Durham Ox" p.h., Forth-pl., for trustees of Mr. Dixon.—City Council to protect timbers at Elswick Grange, at £625. Plans by J. F. C. Solomon, City Estate and Property Surveyor.—J. Walton Taylor, Union-bldgs., St. John-st., architect, for conversion of Orphan House, Northumberland-st., into Y.M.C.A. hostel.

Northumberland.—C.C. to build communal kitchens. Plans by W. W. Tasker, architect, Council Offices, Mitford-rd., Morpeth.

Peterborough.—T.C. approved: Commercial garage and repair workshop, L. E. Taylor (1933), Ltd.

Rotherham. — E.C. propose municipal restaurant at Eastwood, at £1,500 and central cooking depot at Greasbrough, at £1,500. Plans by V. Turner, Boro. Eng.—T.C. propose additional freezing rooms at cold stores.—T.C. has received permission for adaptation of property for alternative office accommodation for police.—T.C. approved: works additions, J. J. Habershon and Sons, Ltd.; shed to works, John Brown and Co., Ltd.

Sheffield.—T.C. to adapt Abbeydale Hall for community feeding centre and clothing store.—Additional shelter accommodation at Council schools, to be provided at £26,500.—T.C. propose branch library near Hurlfield-rd.—T.C. approved: re-building sales showrooms, G. Williams (Trimming House).

Southgate. — T.C. to purchase and erect two wooden huts at Broomfield park, at £300.

Stoke-on-Trent. — T.C. to provide emergency feeding centres at four town halls. Plans by A. Burton, City Sur.

Sunderland. — Structural alterations to various premises in order to provide community feeding centres to be carried out by T.C. at £5,184.—Matkin and Hawkins, Barclay's Bank-cham., Fawcett-st., prepared plans for minor alterations at 57, Broughan-st., for Vaux and Son, brewers.—T. W. Ford, prepared plans for garage and shelter for M. Graham.

Tynemouth. — T.C. to provide and equip two communal feeding centres. Plans by D. M. O'Herlihy, Boro' Sur.

Wallsend.—Plans approved for additions to office accommodation for North-Eastern Marine Eng. Co., Ltd. Plans by L. J. Couves and Partners, Westfield-rd., Gosforth, Newcastle-on-Tyne.—Kitchen accommodation in connection with emergency feeding centres to be established at two schools and two church halls. J. A. Blench, Boro. Sur.—T.C. instructed Boro. Sur. to build garage for housing fire engines, etc.

Warrington. — T.C. approved: canteen, first aid post and store to works, Winwick Street Tannery, Ltd.—Thomas Looker and Sons, Ltd., propose extensions to works.

West Hartlepool.—F. Durkin, Boro' Eng., prepared plans for construction of Roseberry-rd. No contracts let.—T.C. to apply for consent to borrow £3,950 for completion of carriageways to serve houses on Seaton-la. estate.—Council to build a communal feeding centre. Plans by F. Durkin, Boro' Eng.

West Riding.—C.C. to drain two fields at Hill Top Farm, Middleton Sanatorium, at £350; shelters and provision of protective brickwork, £1,919; sanitary accommodation for nurses' quarters, £167; further two shelters, £365.

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